The American Economic Review

VOLUME XVIII, NO. 3 SEPTEMBER, 1928

Publication Office: 450 Ahnaip Street, Menasha, Wis.

Executive Office: American Economic Association, Northwestern University, Evanston, Ill.

Editorial Office: 222 Charles River Road, Cambridge, Mass.

Application has been made for transfer of second class entry from the post office at Saint Albans, Vermont to Menasha, Wisconsin.

Price, in paper $1.25

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THE McNARY-HAUGEN MOVEMENT

Although this article in a sense merely continues the account of the progress of farm relief that was begun in the last issue of this journal, it is almost altogether concerned with the McNary-Haugen movement, because little else in the way of farm relief activity has occurred. The seriousness of this movement has not been realized generally. It is inadequately discussed in terms of economics only; its significance is far more political than economic. McNary-Haugenism represents an alignment, running crosswise of established party lines, which more nearly disrupts these lines than any alignment since populism. The majority in favor of the 1927 bill in the Senate included 52 per cent of the voting Republicans and 57 per cent of the voting Democrats. The 223 who voted for it in the House included 52 per cent of the voting Republicans and about the same percentage of the Democrats. True, it has not given us as effective a third-party movement as the Rooseveltian episode; but third-party strategy is losing its efficacy these days, giving place to blocs within established parties. Being regular Republicans or Democrats and yet voting with a bloc against the majority policy of the party in Congress, if necessary, seems to be the method of escape from the growing third-party dominance which is being evolved. The blocs have written most of the domestic political history of the last three Congresses, and have made largely negative the rôle of the present chief executive of the nation.

The issue involved is more fundamental than McNary-Haugenism itself. It is agriculture's stand against the domination of its affairs and the affairs of the country by the commercial and industrial interests. Labor has never contested this supremacy successfully in the political field; and in its present condition of relative prosperity, it is even less inclined than before to contest. The agricultural interests of the country for a long time have felt the need of protecting themselves politically against the business interests. The formation of the "agricultural bloc" in May, 1921, was a visible expression of that feeling. But the bloc needed some vigorous measure around which to rally the forces of agriculture. The McNary-Haugen plan proved to be that measure.

The McNary-Haugen plan first appeared in print in a pamphlet called *Equality for Agriculture* published without the author's name early in 1922. Three thousand copies of this were distributed. A second edition appeared later in the same year, this being the report submitted in October to President Howard of the American Farm Bureau Federation for his consideration. This edition bears the names of George M. Peek and Hugh S. Johnson as authors. Mr. Peek had not long before been put in charge of the fortunes of the sorely distressed Moline Plow Company of Moline, Illinois. How successful his adminstration of the affairs of this corporation has been, may be judged by the present position of its shares on the stock market. Mr. Johnson was an attorney for the Moline Plow Company.

The essential idea of the plan as presented in these first pamphlets was exactly as it is now. The surplus above domestic consumption was to be sold in the export market at world prices, and the losses recouped by "a differential loan assessment on each pound or bushel when and as sold by the farmer." This was to be a way of "securing equality for agriculture in the benefits of the protective tariff." Mr. Peek had the idea that "the fair exchange value of the crop is reduced in exact proportion with the protection afforded industry. . . . ." "Either agriculture must die, or a way must be found so to revise protection as to insure agriculture a fair exchange value for its crop. . . . . Free trade is unthinkable." The other conspicuous feature of the plan then presented was the definition of "fair exchange value" of any crop as "one which bears the same ratio to the current general price index as a ten-year, pre-war average crop price bears to the average general price index, for the same period." This was supposed to give a price for the crop equal to "cost of production plus a profit." That the amount of the import duty upon the crop was what would determine domestic prices under this scheme, was not appreciated at this time. The assessment on the producers was to be made by paying them part of the price for their grain in the form of "script," the redeemable value of which would be announced later when operating costs and losses had been determined.

That Mr. Peek assisted in Secretary Wallace's National Agricultural Conference in January of 1922, is obvious from the language of its recommendation relative to prices of farm products. But he was not satisfied with this general statement. He remained behind and urged his plan upon Secretary Wallace and even President Harding. Secretary Wallace was sufficiently impressed to call together a group of representative men to consider it. In that group of fourteen men were Julius Barnes, Otto Kahn, Rufus Dawes, Thomas Wilson (Wilson & Company, Chicago), Fred Wells (Peavy Grain Company, Minne-

apolis), and J. R. Howard and Gray Silver of the American Farm Bureau Federation, besides Peek, Johnson, Secretary Wallace and Dr. H. C. Taylor, Chief of the Bureau of Agricultural Economics. Barnes was greatly annoyed with Secretary Wallace for calling the conference. Kahn was more kindly disposed, but urged waiting six months to see if price relations did not improve.

No further action was taken with respect to the proposal, but Secretary Wallace kept thinking more and more kindly of it. His report to the President on *The Wheat Situation* in November, 1923, contains a virtual endorsement of the plan (p. 24). In October, 1923, he sent Dr. Taylor out through the Northwest to study the situation at first hand. Shortly before, the state convention of the North Dakota bankers had endorsed the Peek plan and sent a delegation to Washington to present it. Secretary Wallace had tentatively approved it; Mr. Eugene Meyer had opposed it. Dr. Taylor found it the subject of discussion in every group of farmers with whom he met. So did Mr. Eugene Meyer and Mr. Frank Mondell whom President Coolidge shortly sent out through the same territory on a similar errand. On November 12, Secretary Wallace gave out an interview to the Associated Press in Chicago, in which he publicly endorsed the plan. In the meantime, he put Charles J. Brand, consulting specialist on his staff and formerly chief of the Bureau of Markets, at the task of drafting a bill embodying the Peek plan. Brand went out to Illinois to obtain Peek's help with it. What Brand prepared was whipped into final shape in the bill-drafting department of Congress, introduced on January 16, 1924, as the first McNary-Haugen bill, and rejected the following June. This bill contained all the features of the original Peek plan, the price-ratio provision for determining fair prices, the provision for selling the surplus abroad at a loss, the equalization fee, and even the scrip device for collecting the fee. Table 1 shows that the vote followed geographic rather than party lines, the West and Corn Belt favoring it, and the East and South opposing it.

The McNary-Haugen bill of 1925 was reported favorably by both committees, but did not escape from the legislative jam at the close of the 68th Congress. In form, it was somewhat simplified from the original. The important changes came with the 1926 bill. The agitation for a coöperative marketing plan was having its effect. Congressman Dickinson introduced a bill similar to the others, but providing for the actual handling of the surplus by coöperatives whenever possible. The large cotton crop of 1926 aroused the cotton coöperatives to an interest in this feature of the plan. Handling only about 10 per cent of the crop, they knew that any holding which they might do would benefit non-members more than themselves and might easily wreck

TABLE 1. GEOGRAPHICAL DISTRIBUTION OF VOTES IN SENATE ON THE McNARY-HAUGEN BILLS

States	June 24, 1926			Feb. 11, 1927			Apr. 12, 1928		
	Yea's	Nay's	Not voting	Yea's	Nay's	Not voting	Yea's	Nay's	Not voting
New England:									
Maine		2		1	1			1	1
New Hampshire		2			1	1		2	
Vermont		1	1		2			2	
Massachusetts		2			2			1	1
Rhode Island		2			2			2	
Connecticut		1	1		2			1	1
Total		10	2	1	10	1		9	3
Middle Atlantic:									
New York	1	1		1		1	2		
New Jersey		2			1	1		1	1
Pennsylvania		2			2			1	
Total	1	5		1	3	2	2	2	1
East North Central:									
Ohio		2			2			1	
Indiana	2			2			2		
Illinois	1		1	1			1		
Michigan		1	1	1	1		2		
Wisconsin	1	1		1	1		2		
Total	4	4	2	5	4		7	1	
West North Central:									
Minnesota	2			2			2		
Iowa	2			2			2		
Missouri	1	1		1	1		1		1
North Dakota			2	2			2		
South Dakota	2			1		1	2		
Nebraska	2			2			1		1
Kansas	2			2			2		
Total	11	1	2	12	1	1	12		2
South Atlantic:									
Delaware		1	1		1	1		1	1
Maryland		2			2			2	
Virginia		2			1	1		2	
West Virginia	1	1		1	1			1	1
North Carolina	1		1	1	1		2		
South Carolina		2		1	1		1	1	
Georgia		2			2		1		1
Florida		1	1	2			1		1
Total	2	11	3	5	9	2	5	7	4
East South Central:									
Kentucky		2			2		2		
Tennessee	2			2			2		
Alabama	1	1			2		2		
Mississippi		2			2		2		
Total	3	5		2	6		8		

TABLE 1 (CONTINUED)

States	June 24, 1926			Feb. 11, 1927			Apr. 12, 1928		
	Yea's	Nay's	Not voting	Yea's	Nay's	Not voting	Yea's	Nay's	Not voting
West South Central:									
Arkansas	1	1		2			1		1
Louisiana		2		1		1	2		
Oklahoma	2			2			2		
Texas	1	1		2			2		
Total	4	4		7		1	7		1
Mountain:									
Montana	1	1		1	1		1		1
Idaho	1	1		1	1		1	1	
Wyoming	1		1	1	1		1	1	
Colorado	1	1		1	1		1	1	
New Mexico	2			1		1	1		1
Arizona	2			2			2		
Utah		1	1		1	1			2
Nevada	1		1	2			2		
Total	9	4	3	9	5	2	9	3	4
Pacific:									
Washington	2			2			2		
Oregon	2			2			1		1
California	1	1		1	1			1	1
Total	5	1		5	1		3	1	2
United States	39	45	12	47	39	9	53	23	17

their organizations. Some system by which all the cotton growers must participate in the holding and share the gains and losses had come to have a strong appeal to them. At the conference at Memphis in January, 1926, the two groups joined forces and arranged to draft a bill after the Dickinson model. The equalization fee was not to apply to corn or cotton until three years after passage of the act, and not then unless authorized by Congress. The House vote on this bill was 167 to 212. The tables show that it received only 16 more Southern votes than the first bill, and lost about an equal number in the East North Central and the Pacific sections. The Senate vote on June 24 showed even less Southern support.

In interpreting this 1926 vote, one must realize that there had been a national election in which the administration forces had won an overwhelming victory. Equalling the 1924 vote was therefore a signal achievement.

The new bill presented in 1927 differed from the preceding principally in providing for an equalization fee for cotton at once, this to

TABLE 2. GEOGRAPHICAL DISTRIBUTION OF VOTES IN THE HOUSE ON THE MCNARY-HAUGEN BILLS

States	June 3, 1924			May 21, 1926			Feb. 17, 1927			May 3, 1928		
	Yea's	Nay's	Not Voting	Yea's	Nay's	Not Voting	Yea's	Nay's	Not Voting	Yea's	Nay's	Not Voting
New England:												
Maine		3	1		4			4			3	1
New Hampshire		2			2			2			2	
Vermont		2			2			2			1	1
Massachusetts	1	13	2		12	2		14	1		13	2
Rhode Island		3			1	2		3			3	
Connecticut		5			5			5			3	2
Total	1	28	3		26	4		30	1		25	6
Middle Atlantic:												
New York	1	34	8		29	14	2	34	7	4	15	23
New Jersey		11	1		10	2		10	3		11	
Pennsylvania	9	20	7	8	19	9	6	17	13	4	16	16
Total	10	65	16	8	58	25	8	61	23	8	42	39
East North Central:												
Ohio	10	10	2	5	16		7	13		5	11	5
Indiana	11	2		13			12		1	8		5
Illinois	16	9	2	18	8	1	16	7	2	14	3	9
Michigan	7	6		3	9	1	7	5	1	9	1	3
Wisconsin	5	6		7	2	2	10	1		10		
Total	49	23	4	46	35	4	52	26	4	46	15	23
West North Central:												
Minnesota	7	2	1	9	1		9	1		9	1	
Iowa	11			11			11			9		1
Missouri	12	4		12	4		14	2		12	2	2
North Dakota	3			3			3			3		
South Dakota	3			3			3			3		
Nebraska	6			6			6			6		
Kansas	8			7	1		6	1	1	0		2
Total	50	6	1	51	6		52	4	1	48	3	5
South Atlantic:												
Delaware		1			1			1				1
Maryland		6		1	5		2	3	1	4	1	1
Virginia		10		1	8	1	1	9		1	7	3
West Virginia	4		2		3	2	2	3	1	2	3	1
North Carolina	1	7	2	7	2	1	6	3	1	5	1	4
South Carolina		6	1	3	4		3	4		3	4	
Georgia	1	8	2	3	8	1	6	5	1	5	6	1
Florida		2	2	1	1	2	1	3		1		3
Total	6	40	9	16	32	7	21	31	4	21	22	14
East South Central:												
Kentucky	5	5	1		8	3	9	2		8	2	1
Tennessee	2	8		4	5	1	8	2		6	1	3
Alabama	1	7	2	6	3	1	8	2		7	3	
Mississippi		6	2	2	6		7		1			
Total	8	26	5	12	22	4	32	6	1	29	6	4

Table 2 (continued)

States	June 3, 1924			May 21, 1926			Feb. 17, 1927			May 3, 1928		
	Yea's	Nay's	Not voting	Yea's	Nay's	Not voting	Yea's	Nay's	Not voting	Yea's	Nay's	Not voting
West South Central:												
Arkansas	3	3	1	3	3	1	6		1	4		3
Louisiana	1	7			8		3	5		7	1	
Oklahoma	8			7	1		7	1		8		
Texas	1	16	1	4	12	2	11	7		9	4	5
Total	13	26	2	14	24	3	27	13	1	28	5	8
Mountain:												
Montana	2			2			2			2		
Idaho	2			2			2			2		
Wyoming	1			1			1			1		
Colorado	3	1		3	1		2	2		3		1
New Mexico	1			1					1	1		
Arizona	1			1			1					1
Utah	2			2			2		1	2		
Nevada	1			1			1			1		
Total	13	1		13	1		11	2	2	12		2
Pacific:												
Washington	5			4	1		4	1		4		1
Oregon	3			1	2		2	1		2	1	
California	3	6	2	2	5	3	5	3	3	6	2	3
	11	6	2	7	8	3	11	5	3	12	3	4
United States	161	221	42	671	212	51	214	178	39	204	121	105

be used in accumulating funds with which to finance the holding of large crops of cotton; in omitting cattle and butter from the list of commodities and adding rice; in making the operation of the plan dependent upon a vote in favor of it by representatives of a half of the product; by providing for an advisory commodity council for each of the commodities; and by providing for loans to coöperatives for purchase and construction of storage facilities. About forty of the votes gained were in the South, and ten were in the Corn Belt and on the Pacific Coast. Virtually all of the eight new votes in the Senate were from the South.

The veto message of February, 1927, was a congeries of adverse opinions and objections from several different sources thrown together without definite sequence and with much repetition of points. Much of the analysis was shrewd; and as much of it equally naïve. The proponents of the plan met it in two ways, by preparing a careful analysis of it, and by meeting as many of its objections as possible, without sacrificing the essential equalization fee principle, in their re-

vised version of the bill. Many of the changes were merely in the interest of clarity, others to meet minor objections. The 1928 bill was a better document from a legislative and administrative standpoint than its predecessor. The searching criticism of the veto message is the most important contribution that has been made to the plan.

The outstanding feature of the 1928 congressional action was the increase in the number not voting, 8 senators and 66 representatives swinging into this column. As a result of this mostly, the negative vote in the Senate fell from 39 to 23. There was an actual gain of 6 yea's in the Senate. In the House, the negative vote fell from 178 to 121, and the affirmative vote only from 214 to 204. The new affirmative votes in the Senate came mostly from New York, Ohio, Michigan, Wisconsin, and the East South Central states. In the House, the large decreases in the negative votes were in New York, Illinois, Michigan, Arkansas, and Texas. The South Atlantic Group in both House and Senate swung a little more toward the bill.

The vote in the Senate on May 25 on over-riding the veto was 50 to 31, which means that only 3 yea's were changed to nay's; but 8 of those not voting before now turned in nay's. Had a vote been taken in the House, there would no doubt have been a similar shifting from the not-voting to the nay's column.

The journalistic comment on the second veto message has mostly referred to its "vigor of utterance," or "intemperateness," according to which interest it represents. It would be more to the point to stress the tendency to exaggeration and even misconstruction. The author, in place of analyzing the measure carefully, let play upon its essential principles the full force of his fundamentally laissez-faire reactions. Few economists indeed would exalt to as authoritative a rôle as he the "unalterable economic laws" upon which he constantly calls. On some features of the measure, however, it is clearer and sounder than the first veto message. It is inconsistent within itself on several points, especially when the contribution from the Attorney-General's office is brought into the picture—as it should be, since much of the analysis is far more economic than legal, covering the same ground as the first part of the message.

Obviously it will be impossible in this article to analyze all the features of the McNary-Haugen proposals. What will be done instead is to single out the aspects that have figured most largely in the first veto message, the analysis of this message by the "Committee of 22," the 1928 revision of the bill, the second veto message, and the debates and discussion that have accompanied these. Thus history and analysis will be combined in one presentation.

First, let us dismiss the issue of constitutionality with a word or two. It is for the political scientists and not for the economists to say whether it is better policy to have the Attorney-General's office or the United States Supreme Court declare measures unconstitutional. If the President had had no other grounds for the veto in this case except this opinion of unconstitutionality, and had vetoed the measure solely because of this, the nation would have had a case of a strong majority preference being denied because of a negative opinion of a politically appointed cabinet officer and his legal assistants. The nation would surely prefer that the Supreme Court render such opinions. The other practice will produce the peculiar situation of the Supreme Court having a chance to review only those measures on which the Attorney-General has an affirmative opinion as to constitutionality. Clearly in this case the issue of constitutionality was of minor importance in the President's decision. It was raised to strengthen a case against the measure already deemed more than sufficient.

The outstanding issue between Congress and the executive branch of the government is whether or not the McNary-Haugen measure is price-fixing. The procedure contemplated by the proponents of the measure, so far as wheat and other tariff-protected products are concerned, is to have the "Federal Farm Marketing Board" make contracts with exporters, processors and middlemen to go out into the domestic market and buy at whatever price happens to prevail, and then sell in the foreign market at whatever price prevails there, the Board agreeing in such contracts to recoup them for the difference in price, and pay the handling costs. It is intended that the Board will contract for enough sales abroad to raise the domestic level by the amount of the tariff duty plus other costs of importation. Under such procedure, the amount of the tariff duty will determine the amount of the increase in price. The McNary-Haugen bill could be much more specific than it is on this point; but not without playing up the tariff more than the Democrats in Congress would like. The veto messages avoid the subject of the tariff in this connection as if it were a secret rite, and with even better reasons. But the vagueness of the bill on this point gives the authors of these messages a chance to outline a plan of operation under the bill of their own—namely, have the Board specify in its contracts the prices at which the commodities will be bought and sold. Note the following from the last message:

> The board would be compelled to arrive in some way at the premium on the domestic price which would be demanded from the consumer, and this figure would have to be fixed in the contracts which it would make with the millers, packers, canners, spinners, and other processors. Such prices and other terms fixed in the contracts would be used by the board to calculate

the losses upon which it will base the size of the equalization fee. This procedure is the very essence of price fixing no matter how cumbersome and crudely camouflaged it may be.

Indeed such a procedure would be price-fixing; but it is not what the proponents of the measure have in mind, unless they are keeping something under cover. At one stage, the bill of this year had in it the following statement covering this point:

The price at which the surplus or any part thereof is to be acquired or disposed of under any marketing agreement shall not be fixed in such agreement, but all such acquisitions and disposals shall be made subject to the prevailing competitive conditions of the markets in which they occur.

Why this was dropped from the final draft of the measure no doubt needs to be explained. Probably it was from a desire not to tie the hands of the Board more than necessary. Who can forecast exactly the practices that may need to be resorted to?

Nothing in the bill justifies the oft-repeated statement in both messages that the bill grants unlimited power to the Board to fix prices "at will."[1] The maximum price under the equalization fee arrangement is fixed by the import duty set by Congress, and by the President under the flexible tariff, except as it may also vary with the amount of the equalization fee, which is determined by the size of the crop. The equalization plan is price-fixing in exactly the same way that the tariff is price-fixing. As Sir Josiah Stamp expressed it, "The scheme is not a price-fixing one, for it merely creates an addition to a moving world price." It may be argued that whether prices are fixed absolutely or relative to a moving price is inconsequential—it is still price-fixing; but if so, then import duties are price-fixing.

There is really only one open slip in the second message on this point. In discussing the effect of collecting the equalization fee on imports the same as upon domestic products, the message says that this would "raise the domestic price to the consumer, not only the full amount permitted by the tariff, but as far above that amount as the Board might deem proper and expedient." The latter part of this statement is without foundation. That the first part slipped in inadvertently indicates what one would suppose, that the sponsors of the two veto messages know as well as anybody that the tariff duty itself is what would fix the price increase.

[1] Note the following: " . . . This act does by its terms, as it appears to me, and as claimed by its sponsors, commit to them absolute power to control, regulate, raise and lower at will at all times, so long as they deem it advisable, the price which producers may obtain for their products, and all the people must pay or go without." (Attorney-General, Second Message.)

"The present measure . . . carries no limitation as to the extent of pure inflation which it can undertake." (President's part of Second Message.)

And yet read the following from the Attorney-General's part of the message:

The theory of this measure is not that the board shall fix artificial prices through definite prices named in the agreement, but that it shall assist coöperatives to influence the prevailing price indirectly through control and disposition of the surplus of the commodity under the marketing agreements. (Senate Committee report, p. 5.)

What is to prevent the representatives of wheat, corn, or any other crop in which the board authorizes trading, from forcing the price to consumers of food made from it in this country to any height?

The answer should not be difficult for anyone who is able to figure out, as is done in the same veto message, that existing tariff duties on cotton goods and other manufacturers will not provide adequate protection when we begin dumping our surpluses of raw materials abroad.

The foregoing discussion applies only to commodities like wheat, rice and tobacco, those of which we have an exportable surplus. The 1927 bill in effect provided three alternative plans: (1) For cotton, to which the above plan cannot be applied because no import duty exists, and which one would not help if it did, the method of financing the storage of the surplus of a large crop out of a fee, also called "an equalization fee," collected in the same manner as the other fees. (2) For corn and swine, a method somewhere between the two, designed to stabilize production and smooth out the fluctuations of the corn-and-hog cycle, and raise prices very little, this being possible because the import duties on these products are low. (3) On all other commodities, loans to coöperatives for storage, and application of the first method upon subsequent approval by Congress. The 1928 bill clarifies the foregoing by stating that loans may be made to coöperatives for the purpose of assisting them "in controlling any domestic regional or national, seasonal or year's total surplus of any agricultural commodity in excess of the requirements for orderly marketing or in excess of the domestic requirements of that commodity." The 1928 bill thus clearly had in mind two types of surpluses, the temporary ones mostly due to favorable weather conditions, and the generally prevailing exportable surpluses of certain crops.

Granted that the McNary-Haugen plan would raise the price of wheat the full amount of the tariff duty, of how many other farm products is this true? Tariff duties are already effective on sugar, wool, flax, lemons, oranges, raisins, and nuts. They are effective locally, or on certain grades, or part of the time, on wheat, corn, oats, rice, dairy products, eggs, tobacco, potatoes, and a considerable list of other products. The McNary-Haugen plan would raise the price of most in this second list only when and where the tariff does not. The prob-

able net effect on the domestic price of wheat would be considerably less than the tariff duty. Hence, if the bill had become an act, and if it had been put into operation fully at once, it would not have greatly raised domestic prices of farm products and of food and clothing. The statements in the veto message on this point, especially the one referring to its allowing the board to "alter the cost of living at will," are greatly exaggerated. But not so much exaggerated as those usually made by the sponsors for the bill. With the plan coming into operation gradually, a commodity or so at a time, as would surely be the case, its effect on the cost of living would be noticed very little.

The 1927 veto message contained the specific charge that the plan means that "we shall send cheap cotton abroad and sell high cotton at home," and thus put our cotton mills out of business. The 1928 message is not so artless on this point. With no import duty on cotton, a great lowering price abroad would be impossible. The cotton interests backing the measure have had no interest from the beginning in a plan for selling two-thirds of the cotton abroad "at a loss" for the sake of raising the market price at home. It would not only penalize the domestic mills, but would leave the growers very little, if anything, as a net price after the equalization fee was collected. Moreover, an import duty would first have to be provided for cotton; and such a provision would have repulsed most of the Democratic support for the measure. The 1928 message states that it "would be conceivable that the foreign mills could obtain American cotton for prices substantially less than those paid by domestic mills," and then slips into the positive statement that foreign mills "would undoubtedly capture our existing export markets" for cotton goods. The bill clearly provides only for the more orderly marketing of cotton. Whatever price changes result from this will affect foreign prices the same as domestic prices. The equalization fee on cotton must be recompensed out of a higher world level of prices, or a better domestic marketing system, or not at all. The only exception which must be made to this statement is that the Board might export too large a quantity of cotton some years, making it necessary to ship some back, if the domestic mills were to supply the usual markets. In such a case, the domestic price might temporarily rise as much higher than the foreign as the cost of transportation of cotton, or probably cotton goods, to the United States. The possibility of this is real enough to give a little point to the arguments advanced on the floor of Congress by representatives from the textile districts, and to the statements in the veto message.

For export commodities carrying an import duty, like wheat, the situation would be different. The 1928 bill, following an attack on this point in the first veto message, provided that the equalization fee was

to be collected on imported farm products and "any food product" derived therefrom.

The strongest reason which the administration has for opposing the bill was scarcely mentioned in the first veto message. It has probably been best expressed by Secretary Mellon in his official letter of June 25, 1926:

> Foreign consumers under the proposed plan will secure American commodities at prices below the American level. European labor could purchase American products at a lower price and could live more cheaply than American labor. Foreign industrial costs would be lowered and the foreign competitor assisted in underselling American products abroad and in our home market.

In the 1928 message, this point is included in Number VI in the last of six "major weaknesses," but in company with the charge taken over from the first message that our producers of dairy and certain other similar farm products will also be penalized. The McNary-Haugenites do not all talk alike on this point. An increasing number of them will be found referring to the administration program as designed to expand industrial exports and contract agricultural exports. Their discussion is replete with attacks on the agricultural self-sufficiency program of Secretary Hoover. Witness the following from Bulletin 17 of the North Central States Conference:

> If the Hoover-Mellon policy of expanding industrial exports, no matter at what costs to other groups, means anything at all, it means the definite submergence of agriculture. These men and their policies say, in substance, that American farmers must provide the food and raw material for American industry and labor at prices no higher than foreign manufacturers and labor pay. Why? In order that American industry may export manufactured goods in competition with Europe.

Other statements go further and positively demand that agriculture be allowed to expand in the export market along with industry. There can be no doubt that the plan would work as Secretary Mellon suggests, but not to any great degree—probably no more than is warranted if the nation really has an earnest desire to revive agriculture or check the urbanization movement.

As to the case for agriculture, the first veto message specifically charged the bill with intent to injure the dairy and feeding farmers by raising the price of mill feed and corn. The answer of the Committee of 22 was that the corn import duty is low; and it might have added that it is already fully effective against much of the dairying in the East. As for mill feeds, there is no provision in the measure for exporting the surplus and making the tariff effective. Mill feeds vary in price closely with the price of corn and oats, and would continue to do

so. A further answer might be that the tariff on dairy products has already been raised, and can be raised again if necessary.

The veto message speaks of the false national economy of producing a surplus and dumping it "at a loss on the foreign market." The President's last opening message to Congress had a remark in similar vein. This represents an unfair interpretation of the phrase "at a loss" as used by the McNary-Haugenites. What they mean is at a loss as compared with the new high domestic level established, not a loss as compared to prices received with no such plan operating. Nevertheless if the plan did increase production and exports and thus lower export prices, then the selling prices abroad would be at a lower level, and hence relatively at a loss. But no argument is needed among economists to prove that much of the production maintained by protective tariffs is likewise carried on at a national loss. The fundamental difference between this plan and the protective system is that this would seem to encourage *a larger production of the right products than is economical*—those in which we have demonstrated our comparative advantage; whereas the protective system promotes *too large a production of the wrong products*—those in which we are at comparative disadvantage. Again no argument is needed to convince economists that the former is the less uneconomical of the two. Aside from the usual considerations, the former carries with it all the advantage of specialization as contrasted with comparative advantage.

The issue as to whether or not the McNary-Haugen scheme will expand agricultural production has not been satisfactorily discussed in Congress, nor is it in the veto messages. The statement appears that "high prices in any given year mean greater acreage the next year." That this is true only to a limited extent has been demonstrated statistically. The defenders of the measure could make a better case against this narrow statement than they have. But they have not proved that a price definitely recognized to have been put upon a higher level will not within five or ten years result in an augmented volume of production. The statistical studies that have included the cumulative effect of even two or three years of good prices, even though these may be due merely to a succession of short crops, all show unmistakable evidence that acreage responds to price changes. The failure of acreage to contract in a period of depression does not prove in the least that it will not expand with higher prices.

There is much point to the statement that a good part of the response observed when single crops are studied is the result of shifting from one crop to another. But there are two answers to this. One is that most areas in the United States produce only one important farm product for export. Much of the Corn Belt really has only

one; likewise of the Cotton Belt. If the equalization fee really raised cotton or corn and hog prices appreciably, there would be a shift to these products without encroaching on the area for any other export product except wheat in some states. In Kansas, Nebraska, and Indiana, wheat and corn acreage would divide the effect of the stimulus; in Oklahoma and Texas, wheat and cotton. In the Spring Wheat region, the stimulus would be shared by wheat, flax, and rye. The other answer is that new land could easily come into crop use, and more product could be obtained from the same area. A reasonable judgment in this point is that more land would come into crops. Statistical studies have demonstrated a high degree of correlation between the prices of cotton and the amount of fertilizer used the following year.

The McNary-Haugenites do not at all times and places contend that their plan will not increase production. As already pointed out, some of them hope for agricultural expansion, and think it is the nation's due. But none of them wants the decline in prices that would accompany it. In the 1928 bill, there is the definite provision that the Board may refuse to assist in the marketing of any product that contrary to advice of the Board shows a "substantially greater than normal increase." It is doubtful if this provision could or would be enforced so as to attain the ends desired. But if prices of only a few farm products were raised much by the plan, as is maintained above, no great expansion of production is to be feared. This is probably the surest answer.

The veto message returns to the idea so played upon by Secretary Jardine, Secretary Hoover, and President Coolidge in their various public pronouncements that it has become boring, that the ideal production program for American agriculture is one which is highly diversified. At times, this has been carried to the point of suggestion that we ought to cut out most of our exports and try to grow most of own sugar, wool, and even rubber. Economists will recognize this as merely an agricultural version of the Republican protective doctrine. If we would carry out such a program, we have been told that the vexing problem of the export surplus would disappear. The authoritative answer to this appears in the following quotation from the recent report of the deans and directors of all the agricultural colleges and experiment stations:

> Diversified farming has been offered as a sort of panacea for all agricultural ills. Diversity has been taken by many to mean a little of many crops and products and not much of any one. The trend in American agriculture is and should be towards a few well-chosen enterprises on each farm. Specialization in the production of two or three well-adapted products rather than wide general diversification is the rule on many successful

farms. The application of science and technical skill to agricultural production favors specialization in a few rather than in many products. Increased use of machinery also favors specialization. Farmers cannot afford equipment for small areas of any one crop. To do the work by hand limits the amount that can be done and increases the cost. Farmers are therefore specializing in the few products for which their region is best adapted economically and naturally. Small areas and great diversity may be desirable in limited localities where production of home products are essential to a good food supply for the farm family, but commercial production demands specialization and concentration.

One may, however, accept the judgment of the deans on this point and also accept the opinion of the veto message to the extent of admitting that the McNary-Haugen plan might result in a little too much stress on certain crops, the crops being conspicuously those which make continual draughts upon the soil. It is also proper to remark here that the President did not bring up this point when he raised the tariff on wheat; nor was it brought up with respect to flax, wheat, corn and a long list of appropriate subjects when the tariff of 1922 was under discussion.

If the exports were increased under the plan, they might easily so depress the world level of prices for wheat, corn, and swine as to rob the growers of much of the gains from a relatively higher domestic price. This point is hastily made in the two veto messages and was not really answered by the committee supporting the bill. The effect of the recent large supply of pork on the export market is an illustration of what might happen.

It seems probable that the cotton supporters of the measure and others hold exaggerated notions of the effect upon prices of having the Board finance the storage of the surplus of large crops. The statistics they have used have even gone so far as to assume that taking a million bales of cotton off the market would raise the price as much as if they were destroyed; and have overlooked the possibility of two or more big crops in succession. The fundamental issue is whether a given yearly surplus of cotton in the hands of producers and middlemen, or passing through their hands as at present, depresses the price more than it would if held in reserve by an official board. The relative rates at which the government and private agencies can borrow money is a factor in this. The extent of the profits now made by warehousemen is another factor. Another is the extent to which marketing channels are actually clogged by a large crop at present. Still another is the probability that the government would be more likely to hang on in the face of a second or third large crop. On the other side is the possibility that a reserve definitely known to be in public hands may have an unwonted psychological effect on the market.

The farmers of the country are at present unduly disturbed by the fact that a large crop may sell for less total money than a small one. They have come to think only of the evil effect of the system with a large crop. They should try congratulating themselves for a while on the fact that when they have a partial crop failure, the prices are often high enough to more than offset the loss in production. The fact of the matter is that income is much more stable than prices. Only the rather large or rather small crops produce incomes seriously irregular. It is doubtful if any equitable system can be devised that will greatly relieve this situation. There is still the problem of financing the storage for a large crop. The producers cannot wait for their money till the consumers get ready for it sometime next year.

The real surplus problem is not this, nor the surplus in excess of domestic consumption; but the surplus defined as that part of the crop which makes the whole sell for less—not in any one year, but over a period of years—than will support a reasonable scale of living on farms. It makes no difference whether this is an export or a domestic surplus. The export market is likely to be a better market than the domestic one, being more stable from having a broader base. The McNary-Haugen surplus export plan is an attempt to obtain a good price even for volumes of product so large as to be partly surplus as above described. Obviously it does not furnish a real solution, considering the problem from a broad national viewpoint. It merely passes the losses on to the consumers.

The 1927 bill included provision for a system of essentially public insurance against price decline. The 1928 bill works out this plan in more detail. Suffice it to say at this time that the plan is still inchoate, and that the Board would need to proceed very cautiously in administering it. The statistical basis furnished for it in the hearings related only to cotton in a period of rising price levels with prices generally rising over a twelve-month period. Besides, if withholding a crop from the market in the fall proves able to raise the price, which is a major premise of much of the whole scheme set up by the bill, then it may conceivably raise the price too high in the fall and force a declining price during the rest of the year, thus wrecking the insurance scheme.

Much argument has been wasted on the question whether or not the equalization fee would be a tax. The first veto message discussed it as a tax for the benefit of a few. The second veto message condemns it as a sales tax levied on the entire community for the benefit of the producers. Think of this as coming from the haunts of the protective system! The trend of the attorney-general's opinion, however, is that it is not a tax, and that it "cannot be sustained under the taxing power of the Constitution."

The most extravagant language of the veto message is that which relates to its administrative difficulties, and no doubt properly so. Less language and more sound analysis could have made an even stronger case on this score. Taking it in its entirety, the program as outlined in the last two bills puts the Board in a position to influence the market continually by its decisions. There can be no question that the trade will be more uncertain than at present as to the future course of prices, because it will have the human conduct of the Board to forecast as well as the weather and the behavior of the producers and consumers. Although the upper limit to which prices can be raised is fixed by the tariff, the Board will not always be able to keep it exactly there. Such subtle influences as the threat of new contracts to exporters will operate to determine prices. Purchase for storage and insurance against price decline will be factors affecting prices; but how, and to what extent, nobody can forecast with reasonable certainty. In time, of course, the conduct of the Board would tend to become regularized, and the effect of different courses of action better understood; but it would never cease to be a disturbing factor. The Board might easily unstabilize prices more by its errors in judgment than stabilize them by holding seasonal or yearly surpluses in reserve. When the argument on this score takes the turn, however, as particularly in the first message, of glorifying "individual and coöperative effort" in place of governmental bureaucracy as the solution of the problem, it is proper to remind the President, as does the farm group in its reply, that the same advice followed for industry would mean abandoning the protective system.

The case made against the measure on the score of its stimulating hostile foreign legislation is an excellent one, but also has some precedents in the protective tariff system.

Comparing the first and last versions of the McNary-Haugen bill brings out some significant trends that may point the way to future developments:

1. The first bills were emergency measures; the recent ones attempt to put agriculture definitely and permanently on a higher plane than formerly.

2. The later bills have linked the scheme up with coöperative marketing. The general contention of the administration that the proper solution of the surplus problem is to let the coöperatives handle them, the new bill meets by providing $400,000,000 that may be loaned to coöperatives to enable them to do this; and providing that equalization fees are to be used to finance the coöperatives in this task only as a second resort. The new bill can therefore be described as including the administration's coöperative marketing plan, appearing first in the Capper-Haugen bill in 1925, in more complete form later in the Fess-

Tincher and Curtis-Crisp bills, but adding the equalization fee device as a second resort. Needless to state, the proponents of the measure fully expect that resort to the equalization fee will prove to be necessary; and hence the administration can with entire consistency reject the whole scheme.

3. The coöperatives have joined the movement increasingly, and hence have come to accept more government aid and intervention as desirable than formerly. The majority of the coöperatives now stand ready to accept even more extreme collaboration with the government than they rebelled against when the Capper-Haugen bill was offered them. President Coolidge is now throwing back at them the arguments which they used for defeating this bill. Part of this difference, however, is explained by differences between coöperative groups. The National Council of Coöperatives was wrecked over this issue.

4. The equalization fee has been broadened to provide funds for a wide group of purposes. It now is essentially a device by virtue of which the government exacts ratably from all producers the funds with which to support a program of orderly marketing in which the coöperatives are to play a major rôle. As now framed, the measure virtually provides compulsory pooling so far as certain of the marketing operations are concerned.

5. The different types of surpluses have been increasingly distinguished and special arrangements set up adapted to each.

6. All agricultural commodities have finally been brought under the purview of the plan.

7. The succeeding bills have pushed the point of collecting the fee nearer and nearer to the export market, partly to simplify the task of collecting, partly to remove it as far as possible from the farmer's conscious experience.

8. The later bills have worked further and further away from the language and even suggestion of price-fixing.

9. The presentation of the plan has more and more carefully avoided mentioning the tariff as a factor in its operation; and the debates on the subject have talked less about "making the tariff effective" and more about orderly marketing.

10. The essential idea of exporting the surplus at less than the domestic price has been adhered to throughout, except that in the current bill it becomes on paper a device of second resort.

11. More recognition is given in the later measures to the need of control of production.

Economists in general have not sensed the urgency of the surplus problem. The world over, producers of certain types of products are

today periodically expanding their production to the point where few of them obtain a profit and a reasonable living. This tendency has appeared in rubber, coffee, sisal, sugar, silk, as well as in coal, petroleum, lumber and other industrial products. No doubt the problem is an old one; but the increasing use of capitalistic methods in production and the increasing fluidity of loan funds, have surely augmented it. In agriculture, it has grown apace with commercialized production. Nearly everywhere, governments have taken a hand in the problem of control. If this is warranted with industrial products, how much more it is warranted with farm products!

The farm group will point out that all the McNary-Haugen plan is proposing is a board armed with the necessary machinery to help the farmers themselves work out the problem through coöperative associations. It is true that the plan as now offered to Congress is in terms of orderly marketing and exportable surpluses rather than in terms of surpluses due to disorderly production; but its exponents have already made progress in the needed direction; and their scheme of control is so set up that it might grow into what is really needed.

A broad general movement toward large-scale marketing, and certain aspects of large-scale production, is under way in agriculture in the United States. All concede that this is what agriculture needs most. But the movement is developing very slowly. The proponents of the McNary-Haugen measure reason that the collaboration of the government will hasten it greatly. Secretary Jardine has exactly the same idea. The difference is only a matter of degree and detail. Probably the most radical proposal made along these lines thus far is that stabilization coöperations be set up which will eventually be well enough established so that they can "announce in advance of the planting of crops a price at which they would stand ready, on a specific date after the production of the crops in question, to purchase any surplus which might be offered, this price being such as would induce the desired proportion and volume of the crops concerned."[2]

Only one other farm relief proposal of major importance has recently been considered. The McNary-Haugen plan has pushed all the rest into obscurity. The one other proposal is the export debenture plan, represented by the Ketcham and Jones bills, defended for three hours in the recent House debates. Professor Charles L. Stewart of the University of Illinois first brought this plan to the attention of Congress in the form of the McKinley-Adkins bills in 1926. Professor Stewart says that he modelled it upon the German plan under which export bounties on grain were paid in the form of certificates that were accepted in payment of import-duties on cocoa, petroleum and other

[2] Report of the Business Men's Commission in Agriculture, on page 33.

products not produced in Germany but subject to revenue duties. Professor Stewart's plan provides export bounties on certain farm products, these to be paid in the form of debentures that will be receivable for import-duties on other goods. It will reduce the customs revenues, but will raise prices to consumers only the amount of the net gain in prices received by producers, instead of this amount plus the equalization fee as under the other plan. Obviously this plan will be much simpler in operation; but it will be more frankly a stimulus to exportation, and hence needs more positive checks, which have been provided in one form or another in the different bills. This plan is sponsored by the National Grange, while the American Farm Bureau Federation is backing the McNary-Haugen plan. The nearest which this plan came to being enacted into law was on a motion in the House on May 3, 1928, to substitute it for the McNary-Haugen bill. The vote was: yea's 146; nay's 185.

The foregoing does not solve the question as to how any Congressman should vote on the measure; or how any economist should vote were he a Congressman.

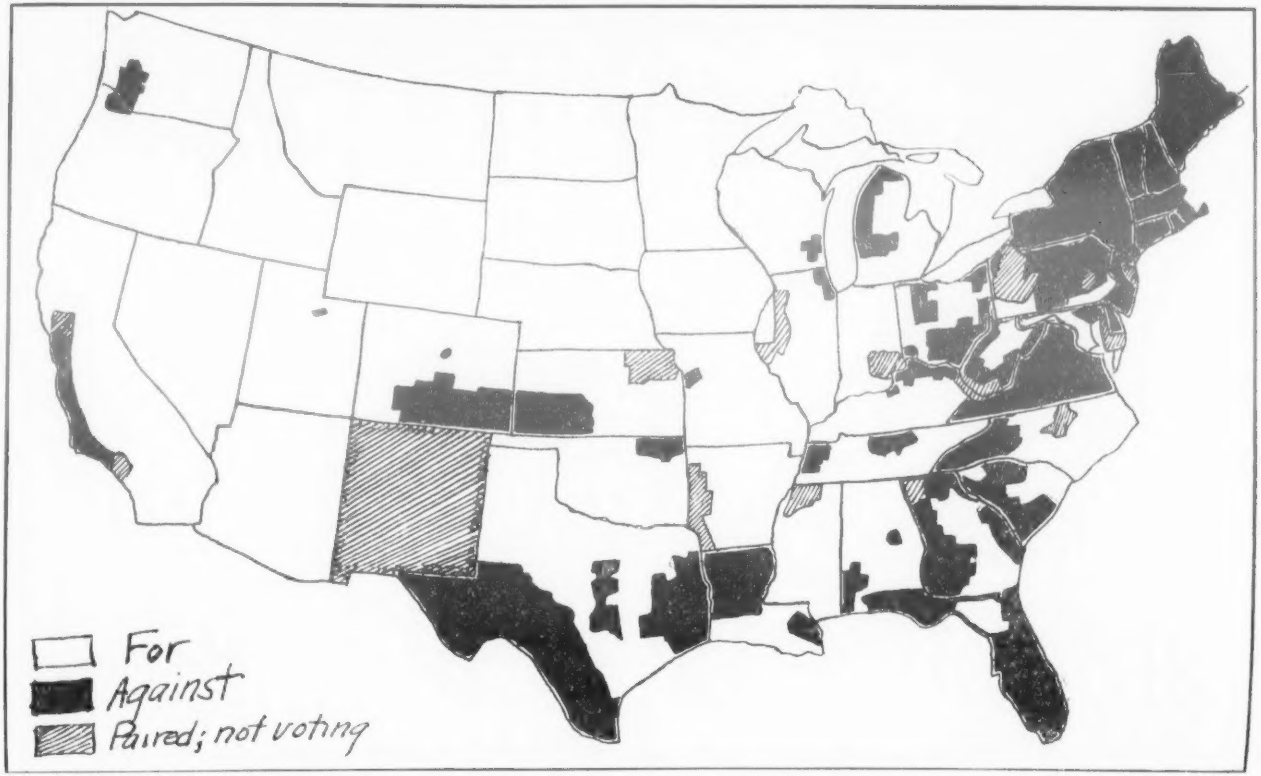
Economists are disposed to say that it represents merely a new form of interference with comparative advantage and should be vigorously opposed. The farm group's answer to them is: "What have you been doing that is particularly effective to get import duties lowered in the past half century? We have given you an abundance of time. We can wait no longer. Our best policy is to join in the tariff grab ourselves. And you are in a poor position indeed to oppose us."

The agricultural bloc can make a similar answer to those who oppose their plan on the ground that it is a large step further away from laissez faire, and we have gone too far already.

A form of attack commonly employed by the administration is to call the plan "economically unsound." The answer made to this is something upon which economists may well ponder. It is that economic soundness may be taken either to assume certain ends as given, in which case the issue is whether the measure in question will obtain these ends; or it may go clear back to the question of the value of the ends. The end set up by the McNary-Haugenites is to increase the purchasing power of farm income. If the measure will accomplish this, then on such a basis it is economically sound. Opponents of the plan have usually conceded by their arguments that it will attain such an end. Economists may easily find adequate reasons to the contrary.

If economic soundness implies the value of the ends, then reasons enough in terms of broad national policy can easily be found for asking the cities to subsidize the country a little for a few years. If it has

House Vote on McNary-Haugen Bill, February, 1927



been good policy to subsidize industrial developments for so long, why is it not good policy to subsidize agriculture for a change, in view of its recent history and present status?

Self-respecting economists may as economists hesitate to take the position that the particular measure is of minor consequence, that what is here involved is the issue of the farm group against the industrial group, and that national welfare at present is more concerned with promoting agriculture than with promoting industry. But as citizens they may so reason and therefore vote with the proponents of the measure rather than against them. A sufficient answer as a citizen, however, is that the plan may work so badly as to discredit the whole farmers' movement for a generation, and that therefore the plan should be simplified and toned down still further before it is approved.

The McNary-Haugen bill will undoubtedly be introduced again in the next Congress. Support for it has been steadily growing in the farming districts, and more and more Congressmen are responding to it. The new members of the 70th Congress had a stronger bent toward it than their predecessors. It gains ground even within the halls of Congress. Most of the remaining votes against it, like those for it, are motivated by sectional interests, not by well-considered reasoning. The accompanying chart shows this very clearly. Outside of the industrial East, most of the remaining opposition is from Congressional districts in cities. These do not bulk large on the map, but they do in the House. The map also makes clear that there are definite limits to the amount of additional support which the bill can expect to receive. Most of the Congressmen from agricultural districts are already supporting it. New York, Pennsylvania, Virginia, and Louisiana are the principal remaining rural strongholds holding out against it.

The surest way to defeat the plan is for a strong administration to advance a vigorous program of agricultural betterment, in place of sitting tight as the present administration has done. If the Republican party is again victorious in the coming election, and the administration pursues a policy with respect to agriculture no more constructive than the present one, the political history of the next four years can be prophesied from what happened to the Newton bill recently—the bill proposing to allow users of imported raw materials to pool their purchases. The farm group in Congress saw in it a chance for business to tighten further its grip upon agriculture, joined forces with the Democrats and buried it very deeply.

Harvard University John D. Black

THE REVENUE ACT OF 1928

The Revenue act of 1928[1] is a radical departure from the act of 1926 with respect to form only. The principal changes in substantive provisions are the reduction in the rate of tax and the increase in exemption applicable to the incomes of corporations, the repeal of the manufacturers' tax on passenger automobiles, and the increase in the exemptions from taxes on admissions and dues.

Summary of 1928 Act

Following is a somewhat fuller outline of the principal changes made in existing federal revenue law by the Revenue act of 1928:

1. The rate of the tax upon corporate incomes is reduced from 13½ per cent to 12 per cent. The lower rate is applicable to incomes of 1928 and succeeding years. This reduction will cause an annual loss in revenue estimated at $123,450,000.

2. The "specific credit" allowed domestic corporations having a net income of $25,000 or less is increased from $2,000 to $3,000. Estimated revenue loss, $12,000,000.

3. The 3 per cent tax upon the manufacturers' prices of passenger automobiles is repealed. Loss, $66,000,000.

4. The exemption from the tax upon amounts paid for admissions to theaters and other places of amusement except admissions of $5 or more to prize fights is increased from 75 cents to $3. Loss, $17,000,000.

5. The exemption from the 10 per cent tax upon club dues is increased from $10 to $25. Loss, $1,000,000.

6. The maximum upon which the earned income credit is permitted is increased from $20,000 to $30,000. Loss, $4,500,000.

7. The taxes on still wines are reduced to the pre-war level, that is, from 16 cents, 40 cents, or $1.00 to 4 cents, 10 cents, or 25 cents per gallon, according to alcoholic content. The tax on grape brandy is reduced from 60 cents to 10 cents per proof gallon. Loss, $1,000,000.

8. The one cent per gallon tax on cereal beverages is repealed. Loss, $185,000.

9. The tax on retailers of narcotics is reduced from $6 to $3. Loss, $150,000.

[1] Approved and effective, except as otherwise provided, May 29, 1928.

Preceding Federal Revenue acts passed since the adoption of the Sixteenth (Income Tax) Amendment to the Constitution of the United States and referred to herein have been discussed in the following named issues of the American Economic Review: 1913 act, issue of March, 1914; 1916 act, issue of December, 1916; 1917 act, issue of December, 1917; 1918 act, issue of June, 1919; 1921 act, issue of March, 1922; 1924 act, issue of September, 1924; 1926 act, issue of September, 1926.

10. The tax on the use of foreign built yachts, $2, $4, or $8, per foot of length, is repealed. Loss, $10,000.

11. The term "motor boat" is defined so as to subject foreign built yachts to the 30 per cent customs duty of the Tariff act of 1922. Estimated increase in revenue, $50,000.

12. More tax on "tax-free covenant" bonds is to be withheld at the source in the case of non-resident aliens and foreign corporations. Increase, $2,000,000.

13. The tax upon $5 or more expensive admissions to prize fights is increased from 10 per cent to 25 per cent. Increase, $750,000.

Estimated reductions in revenue	$225,295,000
Estimated increases in revenue	2,800,000
Net reductions	$222,495,000

The new law includes other changes of more or less importance having reference to the following: installment sales accounting, the basis for determining gain or loss on sales of property by estates or beneficiaries, inclusion of gains from the sale or other disposition of property of insurance companies (other than life or mutual), exemption of income derived by a foreign central bank of issue from bankers' acceptances, employees' and pension trusts, the allocation of depreciation between life tenant and remainderman, interest on refunds, closing agreements, statute of limitations, changing regulations without retroactive application, reference of refunds or credits in excess of $75,000 to the Joint Committee on Internal Revenue Taxation before payment to the taxpayer, and other technical and administrative matters.

Proposals Which Failed of Enactment

Worthy of consideration are some of the proposals which were not incorporated in the Revenue act of 1928. Nearly all of the following were approved by either the House or the Senate, the first few matters mentioned being contested with some vigor.

1. Repeal or substantial modification of the federal estate tax.

2. Publicity of income tax returns.

3. Reduction of taxes to the extent of $400,000,000, largely through the reduction of the rate on corporations to 10 per cent. (This much reduction was not approved by either House.)

4. Application of the reduced tax rate on corporations beginning with incomes of 1927 instead of 1928.

5. Lower and graduated rates upon corporations having net taxable incomes of $15,000 or less.

6. Taxation of dividends paid out of corporate earnings accrued but undistributed prior to March 1, 1913.

7. Prohibition of consolidated returns by affiliated corporations.

8. Substantial modification of Section 220 of the Revenue act of 1926, in order to prevent evasion of surtaxes through unreasonable accumulation of corporate surpluses.

9. Reduction of surtax rates on individual incomes of $20,000 to $80,000.

10. Change in normal or surtax rates or in personal exemptions applicable to net incomes of individuals.

11. Reduction of sale or transfer tax on stock exchange sales.

12. Repeal of the stamp tax on future sales of produce on exchanges.

13. Allowance as a deduction from gross income of all expenses incurred in contesting any tax, whether federal, state, municipal, or otherwise.

14. Allowance as deductions, to owner or long-term lessee of a "coöperative" apartment, of amounts representing the apartment owner's share of the interest and taxes payable by the corporation operating the apartment rather than the allowance of such deductions to the corporation.

15. Allowance as deductions to professional men of traveling and other expenses of attending meetings of professional associations, similar deductions in connection with trade or business being permitted already.

16. Reduction of statutory requirements for retirement of the public debt.

17. Reorganization and consolidation of the field and office forces now under the Revenue Agents and the Collectors of Internal Revenue.

18. Simplified method of calculating the earned income credit.

19. Various tariff amendments, especially for "farm relief."

Plans for Revision

The Revenue act of 1928 is the fourth in the series of post-war tax reductions. There has been one to precede every national election since 1920. Before Congress adjourned in March, 1927, it was generally understood that tax revision would be taken up when that body convened in December. The Revenue act of 1926 had provided for a Joint Committee of the House and Senate on Internal Revenue Taxation. A small staff of this committee had been working for over a year; and a second division of the staff, counselled by an advisory committee of tax experts and economists, had been laboring over various simplifica-

tion proposals for some months before the Ways and Means Committee began its hearings on October 31, 1927.

These hearings were opened with a long prepared statement by Secretary of the Treasury Mellon. After explaining the large underestimates of revenue in previous years as due mainly to non-recurring receipts, the Secretary forecast surpluses of $455,000,000 and $274,000,000 for the fiscal years of 1928 and 1929, respectively. He estimated the surpluses from current receipts,[2] however, at only $137,000,000 and $199,000,000, respectively, and on the basis of these figures recommended "that tax reduction should not in any event be in excess of approximately $225,000,000."

ESTIMATED RECEIPTS AND EXPENDITURES, FISCAL YEARS 1928 AND 1929 [3]
(In millions)

	1928	1929
Current revenue:		
Customs	$602	$602
Internal revenue—		
Income tax	1,885	1,885
Miscellaneous internal revenue	638	640
Miscellaneous receipts	482	468
	$3,607	$3,595
Special receipts including total back income-tax collections	469	213
Total receipts	$4,076	$3,808
Expenditures exclusive of internal revenue refunds	$3,470	$3,396
Internal revenue refunds	151	138
Total expenditures	$3,621	$3,534
Surplus of current revenue over expenditures exclusive of internal-revenue refunds	137	199
Surplus of total receipts over total expenditures	$455	$274

The Secretary summarized his further recommendations as follows:

1. A reduction of the rate of tax on corporate income from 13½ per cent to 12 per cent. It is estimated that such a change will result in a loss in revenue of approximately $135,000,000.

2. Amending those provisions of the law that apply to the tax on corporate income so as to permit corporations with net income of $25,000 or less, and with not more than ten stockholders, to file returns

[2] Excluding non-recurring receipts such as back tax collections, receipts from the sale of War Finance Corporation assets, and receipts from the railroads on account of loans made to them during or following the war.

[3] Hearings before the Committee on Ways and Means, 1927, p. 6.
The April, 1928, estimates for 1929 were, in millions: total receipts, $3,854; total expenditures, $3,642; surplus, $213 ("excluding extraordinary appropriations not as yet authorized" and assuming a continuation of 1926 tax rates). 70th Cong., 1st Sess., Senate Report no. 960, pp. 2 and 46.

and pay the tax as partnerships at their option. It is estimated that such an amendment will result in a loss of from $30,000,000 to $35,000,000 in revenue.

3. A readjustment of the rates applicable to individual incomes (of $16,000 to $80,000) that fall in the so-called intermediate brackets according to the plan outlined below and the table contained in the body of this report. It is estimated that such a change will result in a loss in revenue of approximately $50,000,000.

4. Repeal of the estate tax, resulting in a revenue reduction of $7,000,000.

5. Exemption from taxation of the income derived from American bankers' acceptances held by foreign central banks of issue.[4]

How Much Reduction?

Much of the controversy over revenue revision in the recent session of Congress had to do with the amount of reduction. The Chamber of Commerce of the United States and the Democratic leaders in both House and Senate made much of the Treasury's recurring underestimates of revenue and they urged tax reduction to the extent of $400,000,000 or thereabouts. Nearly all agreed that a major part of any relief should go to corporations. With minor exceptions, there was little effort to make important changes in the rates upon individual incomes. A few progressive Republicans expressed indifference toward tax reduction and a preference for debt redemption or expenditures upon flood control, farm relief, Muscle Shoals and Boulder Dam. Several others also connected the discussion of tax reduction with a consideration of proper policy with respect to debt retirement. In the end, the administration's dislike of deficits and its friendliness toward early debt payment held even the slightly recalcitrant elements of Congress closely to the estimates of Secretary Mellon lest a presidential veto should prevent all tax reduction.

The Ways and Means Committee reported its bill on December 7 estimating that its provisions would occasion a loss in revenue of $232,735,000.[5] The bill passed the House on December 15 with amendments forced by the Democrats that would have brought tax reduction to the extent of $290,000,000. Administration leaders considered that the loss of so much revenue might cause treasury deficits; hence, the majority members of the Senate Finance Committee postponed further action until after the collection of taxes on March 15, 1928. This delay permitted a slight change in estimated revenues and a better forecast of appropriations. It likewise permitted the use of

[4] Hearings before the Committee on Ways and Means, 1927, pp. 7 and 8.
[5] 70th Cong., 1st Sess., House Report no. 2, p. 3.

the revenue measure as a basis for prolonged discussion that shortened the filibustering necessary to prevent the approval of objectionable bills as, for example, the one relating to Boulder Dam. The Treasury's revised estimates of April were made the basis of amendments by the Senate Finance Committee. On May 1, 1928, the Committee recommended a bill calculated to reduce revenues by $200,085,000. The measure as finally agreed to by the Conference Committee on May 25 and approved by the President on May 29, the day of adjournment, provided for an estimated reduction of $222,495,000.

Other Contested Issues

Corporation and Insurance Company Taxes. A major issue in the first post-war drive to lower taxes concerned the excess-profits tax on corporations. This tax was repealed in 1921; but, as a slight offset, the corporation income tax was raised from 10 per cent to 12½ per cent. In 1926, the corporation capital stock tax was repealed, and in lieu thereof the corporation income tax was increased 1 per cent; that is to 13½ per cent.

Business interests urged upon the present Congress the reduction of this rate to 10 per cent. Speaking as a member of the Tax Committee of the United States Chamber of Commerce,[6] Professor T. S. Adams suggested a corporate income tax rate of 7½ to 10 per cent as proper to accompany a normal individual rate of 5 per cent. Congress, like God, helps those who help themselves, he said, and it is an indictment of the efficiency of American business that the corporation rate should be where it is today. He urged that this rate should be placed in line with other taxes before the stage is reached where no further reductions are possible. Thereafter, all rates should be changed proportionally when more or less revenue is needed. If substantial surpluses accrue, let them be refunded to taxpayers instead of applied to additional debt reduction. "The burden of paying the Great War debt should not be laid on this generation alone."

There was not much discussion in Congress as to the ideal tax rate for corporations because fiscal requirements set very practical limits. Every one per cent upon corporate incomes means about $82,000,000 in revenue; a reduction from 13½ per cent to 10 per cent in this rate alone would lessen revenues by about $290,000,000—more than the administration was willing to sanction. The automobile manufacturers, who were perhaps better organized than any other interest besieging Congress, said they would sacrifice some corporate income

[6] "Taxation: What is Ahead of Us and What Should Be Done." Address delivered May 9, 1928 at the Sixteenth Annual Meeting of the Chamber of Commerce of the United States at Washington, D.C.

tax reduction rather than forego the repeal of the 3 per cent excise tax on automobiles. This latter tax brought in $66,000,000 a year. The theater and other interests, also, urged that they share in tax reduction, rather than that all relief should be given to corporations. Consequently, the corporate income rate adopted was half way between the House and Senate rates of 11½ and 12½ per cent, respectively, namely, 12 per cent, the rate which the Secretary of the Treasury had recommended in the first place.

It was originally proposed to apply this reduced rate to corporate incomes of 1927, upon which taxes are paid in 1928. This led to some interesting discussions of the incidence of taxes. It had been urged that the reduction of corporation taxes would mean lower prices to consumers. Well then, said Mr. Garner,[7] and others, why reduce taxes on incomes of a year already past? The corporations added the tax to their prices last year and have already recouped it from consumers; to reduce the tax on 1927 incomes now would not help consumers, but would be an outright bonus to the corporations. Chairman Green's[8] arguments and citations of economists to the effect that such taxes are not shifted to consumers did not appear to be convincing to those who believe that, in the last analysis, consumers pay all taxes anyway. Administration leaders desiring to prevent too much tax reduction probably were not greatly averse to postponing the application of the reduced rate; in any case, Senate amendments made its application begin with corporate incomes of 1928 rather than with those of 1927.

It will be recalled that, for several years, federal income tax laws have not treated all insurance companies exactly like general corporations. The new law narrows the gap in two respects, at least. The act of 1928 makes the 12 per cent corporation rate applicable to incomes of insurance companies, also. This means a tax reduction of only one-third as much for them as for corporations in general. This is due to the fact that insurance companies were not subject to the capital stock tax and did not have their rate raised from 12½ per cent to 13½ per cent as did other corporations when the capital stock tax was repealed in 1926.

Another change which brings some companies more in line with general corporations is the change in the definition of the income of insurance companies, "other than life or mutual." This will probably result in greater fluctuations in their annual income and may also increase their total taxes over a period of years. Heretofore, insurance company income has been defined to include that from underwriting, and also that from rent, interest and dividends. In the new bill, the

[7] Ranking Democratic member of the Ways and Means Committee.
[8] Of the Ways and Means Committee.

Senate added, "and (B) gain during the taxable year from the sale or other disposition of property." The attempt to make this provision applicable to life and mutual insurance companies failed. Realized gains from the sale of capital assets have long been taxable in the hands of individuals and corporations generally. The huge gains reputed to have been made in recent years by insurance companies through the appreciation of their securities and other capital assets have not been subject to income taxes. Fire, casualty, and some other companies will, hereafter, not be so fortunate.

Of the several proposals to grant special aid to small corporations, all but one failed. Secretary Mellon's suggestion to permit them the option to file returns as partnership did not meet with favor. Mr. Garner's amendment permitting the taxation of corporate earnings of $15,000 or less at lower graduated rates was approved by the House, but not by the Senate. There was general agreement, however, to increase from $2,000 to $3,000 the exemption allowed domestic corporations having net incomes of $25,000 or less. It is obvious that any flat exemption such as this has the effect of graduating the real rate of tax upon corporations whose incomes are small enough to benefit by the exemption.

Of special interest to corporations were the proposals with reference to consolidated returns and methods of preventing evasion of surtaxes through the failure to distribute corporate earnings to individual stockholders. Because of the complexities involved in consolidated returns, the Joint Committee recommended that they be discontinued after January 1, 1929, but that the losses of a corporation might be allowed as offsets against the gains of affiliated corporations.[9] The House bill provided for the continuance of consolidated returns after the taxable year of 1928; but it did not provide for the offsetting feature. Mr. Garner argued that the latter gave large holding companies with many small subsidiaries a great advantage over their small independent competitors.

The Senate Finance Committee inserted an additional section permitting affiliated corporations to file consolidated returns for 1929 and subsequent taxable years. It defined the term "affiliated group" for purposes of this section, however, in such a manner as to leave out "Class B" affiliations.[10] But the Finance Committee recognized the

[9] *Report of the Joint Committee on Internal Revenue Taxation*, 1927, vol. I, pp. 13, 14, 63-66.

[10] In a "Class A" affiliation, one corporation owns 95 per cent or more of the stock of one or more other corporations; in a "Class B" affiliation, 95 per cent or more of the stock of two or more corporations is owned by the same interests. It is obvious that a Class B affiliation can become a Class A affiliation, and thus come within the provisions of this new section, by forming a holding company.

complications involved in consolidated returns and admitted the inability of Congress to meet the difficulties through direct legislation. It therefore took the unusual step of recommending the delegation of certain of the legislative powers of Congress to the Commissioner of Internal Revenue in order to meet the complexities of the situation.[11] Both House and Senate agreed to these amendments, the latter of which may prove to be of great importance.

In every income tax law from 1913 to the present there has been a provision to prevent the accumulation of "unreasonable" surpluses by corporations in order that stockholders may thereby escape the high surtaxes to which large individual incomes are subject. Many have thought the 50 per cent penalty too high for enforcement. The Treasury has claimed that it could not determine the "reasonableness" or "unreasonableness" of corporate surpluses. Others have claimed that the Treasury was unsympathetic with this section of the law. Leaders of both political parties have complained of the Treasury's inaction. At any rate there have been practically no attempts at enforcement of this provision until within the past few months. Of late the criticism of the Treasury in this matter seems to have led it to make some test cases.

The Joint Committee[12] recommended giving some incentive to corporations to make reasonable distributions. It was suggested that this might be done by allowing deductions with respect to distributions in the computing of taxable income. The House bill contained quite new and rather long and involved provisions as a substitute for Section 220 of the old law. The Senate and the Conference Committee, however, disapproved of the amendments and left this section practically unchanged.

Automobile Tax. Secretary Mellon's plea for the retention of the 3 per cent excise tax upon passenger automobiles and accessories did not avail in the face of the well-organized campaign of the manufacturers. The Secretary argued that automobile owners are directly and immediately benefitted by federal appropriations to good roads and should therefore make some contribution in return. Furthermore, it is not fair to ask the railroads to contribute increasing taxes, partly to build highways for their competitors, while exempting the latter from any contribution.

> The income tax has gradually become so restricted in its application that it is a class rather than a national tax. . . . . The automobile is a semi-luxury article of such widespread use that it furnishes a broad base on which

[11] See 70th Congress, 1st Session, Senate Report no. 960, pp. 13-15, and House Report no. 1882, pp. 16-17; also the Revenue act of 1928, sections 141 and 142.

[12] *Ibid.*, pp. 11, 12, 48-56.

to apply a low tax. . . . . Once the automobile tax is repealed it cannot be reimposed in time of peace. . . . . The narrowing of the tax base in days of prosperity inevitably means that when the time for increased tax burdens arrives those taxpayers who are unfortunate enough to remain on the rolls are compelled to pay more than their just share. . . . . It should never be forgotten that in taxation the ideal to be aimed at is a broad base and low rates.[13]

Those sponsoring the repeal of this tax secured the support of officers of associations of automobile users, farmers, and others. The Ways and Means Committee presented a bill halving the tax, but the House and Senate both repealed it entirely.

Dues and Admission Taxes. These taxes were not repealed but the exemptions were raised considerably. Mr. Mellon argued against their repeal. The House halved the rate of tax on dues and increased the exemption on admission from 75 cents to $1. The Senate restored the 10 per cent tax on club dues but raised the exemption from $10 to $25 and, with respect to admissions, raised the exemption to $3. The House accepted these Senate amendments; and the Senate accepted the House amendment providing for a 25 per cent tax upon prize fight admissions costing $5 or more. The House accepted, also, a Senate amendment providing for a tax on brokers of theater and other tickets. If such brokers charge an excess of 75 cents or less over the established price, the tax on such excess is only 5 per cent, but on a greater excess the tax is 50 per cent. These changes are effective 30 days after the enactment of the law.

Taxes on Cereal Beverages and Wines. The tax on cereal beverages was repealed and that on wines reduced to the pre-war level. This was upon the representation of the Commissioner of Prohibition that such action would not be detrimental to enforcement of the Prohibition act. These changes were advocated by California grape growers and other interested parties.

Earned Income Credit Limit Raised. It will be recalled that the 25 per cent credit permitted in the computation of taxes on "earned" incomes of individuals was limited by the 1926 act to $20,000, regardless of how large such earned incomes might be. The new law increased this limit to $30,000.

The peculiar method of calculating the earned income credit has been the cause of so many errors on the part of the taxpayers that many revenue agents, accountants, and others advised the elimination of this credit entirely. Some making such recommendation suggested as a sort of substitute the changing of the normal rate from 1½ per cent to 1 per cent on the first $4,000 of taxable income. The Joint

[13] Hearings before the Committee on Ways and Means, 1927, pp. 14-16.

Committee accepted the recommendation of its special advisors to adopt the simpler English method of computing this credit, namely, to allow a deduction equal to 10 per cent of the earned net income.[14] The proposed change in method would be an important step towards simplification but would cause a small loss in revenue. With respect to individual taxpayers, it would occasion small decreases in taxes in some cases and small increases in others. On the whole, the changes in revenues and tax burdens would not be significant, except that any increases are thought to be politically dangerous when all the talk is of reduction. Consequently, the Ways and Means Committee and, in fact, both Houses of Congress rejected the proposed change.

The House passed its bill without any change in the middle bracket surtaxes as recommended by Secretary Mellon but the Senate inserted an amendment similar to the Secretary's proposal. The Senate minority led by Senator Simmons opposed the form of this amendment on the ground that it lessened the levies upon large taxpayers as well as upon those coming in the middle brackets. A compromise resulted in the elimination of this Senate amendment and, as a substitute, the raising of the limit for the earned income credit from $20,000 to $30,000. It was again suggested at this juncture that the Joint Committee's recommendation of the English method of calculating the earned income credit might be accepted in compromise; but one Senator rather favorable to the suggestion is reported to have said that the time available was too short to explain the provision so that the Senators and Representatives would understand it. Consequently the earned income credit remains as it was, except as mentioned above.

Withholding Tax on "Tax-free Covenant" Bonds. The only other change in the law of much importance from a fiscal standpoint is the provision for withholding more tax in certain cases. "In cases where the liability assumed by the obligor does not exceed 2 per cent of the interest, the withholding shall be at the rate of 5 per cent [the maximum normal rate] in case of non-resident aliens and partnerships, and 12 per cent [the regular corporation rate] in the case of foreign corporations, while remaining at 2 per cent, as under the present law, in the case of citizens, residents, and domestic partnerships."[15]

Miscellaneous Provisions

The new revenue law brings about many changes of insufficient importance or of too great technicality to justify discussion in an article of this kind. A few of these may be mentioned, however.

[14] *Report of the Joint Committee on Internal Revenue Taxation,* 1927, vol. I, pp. 9, 10, 30-39. The Engish law formerly allowed a deduction of one-tenth but now allows a deduction of one-sixth.

[15] 70th Congress, 1st Sess., Senate Report no. 960, pp. 29, 30.

The regulations and decisions governing the computing of income from installment sales have been reversed time and again. Changes from the accrual to the installment system of accounting have occasioned most of the difficulty. Reversals of rulings have inevitably led to much confusion and complaint. By what has been characterized as "an entirely illogical but probably defensible compromise," Sections 44 and 705 of the new law try to provide fair treatment for the future and at the same time prevent the opening of more old cases than is absolutely necessary. With respect to real estate sales, initial payments up to 40 per cent do not prevent profits from being computed upon the installment basis under the new provisions.

Both House and Senate approved Secretary Mellon's recommendation of the exemption of income derived by a foreign central bank of issue from bankers' acceptances. The object of this provision is to promote the deposit of foreign balances in American banks and the development of the dollar acceptance market.

Another provision attempts to expedite the closing of tax cases by amending the section relative to closing agreements; another permits a more extensive changing of regulations without the application to cases already closed; others shorten the period of limitation for assessments and claims for refund from three years to two years; another serves to prevent the loss of so much interest upon refunds; and another requires the reference of refunds on credits in excess of $75,000 to the Joint Committee on Internal Revenue Taxation before payment to the taxpayer. The latter provision would appear to be for the purpose of preventing abuses similar to those reported by the Couzens Committee which investigated the Bureau of Internal Revenue two years ago.

Proposals that Failed

Only a few of the more important proposals that failed of enactment will be discussed.

The Estate Tax. The repeal of the estate tax was probably the most important of the seriously contested proposals that failed of enactment. It will be recalled that Secretary Mellon once more recommended the repeal of this tax last fall. The campaign for its repeal has been well organized, well financed, and carried on for years. The methods of some of the organizations were disclosed in the Hearings before the Committee on Ways and Means.[16] Referring to these in the House debate, Chairman Green said: "We have had the most extraordinary, highly financed propaganda for a selfish purpose . . . . that has ever been known in the whole history of this country."[17] The

[16] See *op. cit.*, pp. 801-20, also 580-800.

[17] *Congressional Record*, December 14, 1927, p. 641.

House in committee of the whole defeated the repeal proposal by a vote of 55 to 191.[18] When Chairman Green was nominated by the President as a judge on the Court of Claims and later resigned from Congress in order to accept, it was charged that this was an administration device to secure the repeal of the estate tax at this or a later session.[19]

According to reports believed to be reliable, the administration majority in the Senate Finance Committee favored repeal but agreed not to press the matter if insurgent Republicans would support the other provisions of the bill. Senator Bingham of Connecticut introduced a repeal amendment when the bill was under consideration in the Senate, however; and both he and Senator Fletcher of Florida protested strenuously against the attempts of the federal government to coerce the states. Besides the speeches actually delivered, the *Congressional Record* was filled with other material gathered from many sources under the leave to extend remarks and to print. Very few new arguments were presented, however, and the party leaders preferred to bide their time rather than have no tax reduction at this session of Congress.

Publicity of Returns. Senator Norris apparently took the Senate by surprise one afternoon by proposing his amendment for making income tax returns public records. He explained that his amendment did not mean that the income tax returns should be published in the papers but that members of Congress and others should have access to the returns just as they do to state and local tax records, mortgages, and other public records generally. He and Senator Couzens stressed the abuses permitted by secrecy in the Bureau of Internal Revenue. Senator Walsh (Montana) and Nye pointed out how such secrecy had been a handicap to the committee investigating the oil land frauds, and others argued along similar lines. The Senate accepted the amendment. Statements in the press quoted Secretary Mellon as much opposed to this provision and pointed out that the President would probably veto the bill rather than accept it. It was killed in conference.

Miscellaneous Proposals. A few of the numerous other proposals will be mentioned briefly.

The House bill provided that corporate earnings accrued but undistributed to stockholders prior to March 1, 1913, should be included in income when so distributed. This simplification measure was thought justifiable in view of the time elapsed since the Sixteenth Amendment became effective, but the Senate was unwilling to reverse the practice of the last dozen years.

[18] *Ibid.*, p. 642.

[19] The formal objection to confirmation expressed by some of the Senators was that he was already several years beyond the retirement age. He was confirmed, nevertheless.

The House approved the repeal of the stamp tax on sales of produce on exchanges and a reduction of the tax on the sales of stocks; but the Senate did not want to lose the revenue from these taxes and refused to acquiesce in their elimination.

The House attempted to put owners and long-term lessees of coöperative apartments on an equality with owners residing in their own houses by permitting as deductions the owners' shares of interest and taxes paid by the apartment corporation. The Senate thought this introduced too many complications, and the House receded.

Largely at the instance of the American Medical Association, the Senate inserted the word "profession" between the words "trade" and "business" in Section 23 which permits the deduction from gross income of business expenses, including the expenses of attending meetings of national, state, and local associations and other organizations. The intention was "primarily to permit doctors and other professional men to deduct their expenses in attending meetings of their organizations." This amendment had been opposed on the floor of the Senate by Chairman Smoot of the Finance Committee, and it was killed by the Conference Commitee.

Senator Simmons' proposal to reduce the statutory requirements for debt reduction was not pressed, and even the Democratic leaders in the Senate refused to join western Republicans in supporting proposed "farm-relief" tariff amendments which would have endangered the approval of the entire measure.

The Treasury recommended substantially increased salaries for about 100 of its higher paid legal and technical positions. The House Bill provided for these increases, but, inasmuch as most of these positions were taken care of in other bills, the Senate Finance Committee eliminated this matter from the revenue bill.[20]

Reorganization of Field Forces. The Treasury and the Joint Committee recommended that a study be made of the consolidation of the dual organization consisting of 64 collectors' offices and 36 offices of revenue agents in charge with which taxpayers must deal. It was urged that such consolidation would result in better and more convenient service to taxpayers, closer and more harmonious touch between the central office at Washington and its field organization, and the saving

[20] The problem of personnel and delay in the settlement of tax cases was discussed briefly by the present writer at the Christmas meetings of the American Economic Association. See the American Economic Review, March, 1928, XVIII, Supplement, pp. 116, 117. See also the *Report of the Joint Committee on Internal Revenue Taxation*, 1927, vol. III, pp. 1-200.

The manner in which a few in strategic positions secured their increased salaries by a rider to an unrelated bill passed early in the session is a good illustration of practical legislation. *Alien Property act,* no. 122, 70th Cong. (H. R. 7201), Sec. 23.

in administrative expense of $2,000,000 or more a year.[21] Representatives of the Treasury said that old employees could be taken care of and personnel could be reduced gradually by failure to fill vacancies. The Secretary of the Civil Service Commission stated:

> If favorable action is taken by Congress on this recommendation of the joint committee, it may be stated that the incumbents of positions of deputy collector of internal revenue, which positions are not now classified, will automatically be given a competitive classified status under existing civil service laws and rules, unless Congress specifically provides otherwise.[22]

Despite all of these assurances, it appears that certain influential forces were fearful of losing a few political plums. In any case, the committee of neither House approved the Treasury's recommendation relative to this matter.

New Form of the Revenue Act

The most striking change in the new law is in the matter of arrangement or form including the "liberal use . . . . of catchwords, headlines, different types, indentations, and other typographical improvements." The statute begins with a radical innovation, namely, a table of contents, a really systematic table.

The 1926 act of 136 pages was divided into twelve "Titles." The 1928 act of 104 pages is divided into five "Titles" as follows:

I—Income Tax
II—Miscellaneous Taxes
III—Amendments to 1926 Income Tax
IV—Administrative Provisions
V—General Provisions

Title I—Income Tax, covers 80 pages and is divided into "General provisions" and "Supplemental provisions."

> The General provisions are those in general which apply to the ordinary transactions of the ordinary classes of taxpayers. It is believed that approximately 80 per centum of the taxpayers who file returns will find in the General provisions practically all the income tax statute law of interest to them . . . . (20 pages).
>
> "In the main the Supplemental provisions are those which apply only to extraordinary classes of taxpayers or which apply only to the extraordinary transactions of ordinary classes of taxpayers (60 pages).

The 1926 and prior acts each attempted to reënact all the provisions of the preceding act "with such changes and omissions as the policy of Congress dictated, and then repealed the preceding act, with certain

[21] *Report,* vol. I, pp. 7, 8 and vol. III, p. 200, *et passim.*
[22] *Cong. Record,* December 10, 1927, p. 433.

exceptions." That is, each prior act tried to cover not only the future but also the past in so far as past tax cases were not finally closed—and there are numerous cases pending which are ten years old or older. A neglected aspect of the problem of form is the great increase in complexity which attends each successive repetition of the "omnibus" sections,[23] that is, those sections which attempt to cover an ever-growing number of past laws. Had these sections been rewritten in the act of 1928 with the accumulating volume and complexity necessarily involved, the result would have been almost beyond understanding.

The 1928 act, departing from previous practice, does not repeal the preceding (1926) act but leaves it in effect for incomes of 1927 and prior years, except for minor amendments in Title III. The 1928 act covers 1928 and future years. For old practitioners who have long associated certain section numbers with certain provisions, the changes may cause some initial inconvenience; and it is possible that some adjudications have been upset. But we can trust the experts to take care of themselves. For the ordinary layman, the new arrangement certainly appears to be a great improvement. He will no longer have to wade through so many provisions referring to former years and special situations.[24] If the new statute were provided with a good index it would be quite modern and usable by others than experts.

Comments

At first thought one may be surprised at the prominent place which the public debt policy took in the recent debates on tax reduction. But the reason is not far to seek. It is getting to be difficult to find federal expenses that can be reduced materially. The day of radical post-war tax cuts has almost certainly passed. Federal expenditures have not decreased in recent years so much as many have been led to believe. On the contrary, they have actually increased during the past three years;[25] and appropriations made during the session of Congress just adjourned run to record figures. This Congress provided over $300,000,000 for flood control, a new extraordinary undertaking. Although it is planned to spend this sum over a period of ten years, it is probably only a beginning. Other plans to spend large sums include those for lake and river navigation, farm relief, Muscle Shoals, Boulder Dam and a new navy. No one expects Congress to appropriate all that is asked for all of these projects; but there is little probability of smaller federal expenditures in the future.

[23] For example, sections 279-284 of the act of 1926.

[24] Probably he seldom reads more than the instructions on his return, anyway, perhaps, not even all of them.

[25] See *Annual Report of the Secretary of the Treasury*, 1927, p. 457.

About the only hope for substantial reduction lies in the lessening of debt service. The choice is between now and later. The faster the debt is retired, the greater the revenue requirements during the process, though the smaller such requirements thereafter. During the last nine years this debt has been reduced by about nine billions of dollars. Not nearly all of this amount has been from current tax receipts; a large part has been due to the liquidation of war assets. The statutory sinking refund requirements amount to $354,000,000 for 1928 and gradually increase each year hereafter. The payment of principal and interest on obligations of foreign governments will add about $182,000,000 to the sinking fund this year. In addition to the sinking fund requirements, the Treasury has been applying to debt payment the surpluses not otherwise appropriated. These have averaged $300,000,000 or $400,000,000 for several years.

In favor of the application of such surpluses to rapid debt reduction the following are urged: It is wise to pay debts when the country is prosperous. Paying off the debt improves the national credit and reduces the rate of interest necessary to pay on all refunding. Such payment prepares the country for emergencies. Debt retirement and the elimination of interest thereon affords the largest single opportunity for long-time tax reductions. If expenditures increase in the future, as they probably will, the opposition to increased taxes may be so great that a weak Congress may take the easier but familiar method of raiding the sinking fund. This would be national calamity.

In opposition to large surpluses and rapid debt retirement the following arguments are put forth: Taxes are too heavy, their reduction will aid business and promote general prosperity. The corporation tax rate in particular is too high for equity. Large surpluses are irresistable temptations to extravagant expenditures which tend to persist in years after surpluses disappear. The present statutory sinking fund requirements will extinguish the public debt fast enough, by 1950, barring unforeseen emergencies. The war debt should not be laid on this generation alone. When we shall have retired our debt, we will cancel the debts of European governments to our government because the American people will no longer have the heart to insist upon further payment.

Opinions will inevitably differ about proper debt policy. Most of the arguments on both sides have some plausibility. Also there are imponderables about which no amount of argument will unconvince the convinced. But usually at the bottom of debt and tax controversies there is a conflict of interest struggling for larger shares in the benefits and for smaller shares in the burdens of public expenditure. At the recent session of Congress, attack upon rapid debt reduction seemed

to offer the largest hope of success to the highly organized business interests demanding a cut in the corporation income tax rate. This is not technically a raid upon the statutory sinking fund but it is akin to a raid upon what, by Treasury practice, has almost come to be a supplementary sinking fund. Business and other interests have, of course, a perfect right to attack such governmental policies. In the future we may expect every one to deplore raids upon statutory and supplementary sinking funds, except those who expect to benefit by such action. The latter will present all sorts of plausible arguments. They will probably even say that we should stay in debt for sixty-two years in order to have a reason for collecting more from Europe.

When we come to decide the proper specific tax rate upon corporate income, it is almost wholly a question of administrative expediency. There is no other reason for any tax upon corporations as such. The benefits and burdens of all taxation accrue finally to individuals. Corporations are merely instrumentalities. It is true that corporations enjoy special privileges upon which it may be proper to levy special taxes, but the benefits of these privileges inure to the advantage of individuals and, if properly taxed in the hands of such individuals, need not be taxed to the corporations. The relative ease of securing abundant revenues from corporations is the practical justification of the taxes upon them. We might well abolish all taxes upon them if we could devise, and if popular opinion would approve, an equitable and equally cheap system of collecting the same aggregate from individuals. We have not yet been able to create such an ideal tax system. Our present arrangement reflects present attainment in the development of tax administration.

There is much to be said for making the rate on corporate incomes approximately equal to the normal rate on individuals. Perhaps some addition as a fee for corporate privileges might be justifiable. But in our law we have the anomaly of three "normal" rates instead of merely one on individual incomes. Individual normal and surtax rates are supposed to be graduated somewhat according to ability to pay. But these rates upon non-corporate incomes and the rates an individual may pay upon his income derived from corporations may be utterly inharmonious. If there were not too much popular antagonism to the change, better relations between rates might be brought about by lowering those upon corporations and raising those upon individuals sufficiently to prevent any net loss in revenues. But no member of Congress has had the hardihood to propose such a revision. Besides the administrative difficulty and expense of collecting taxes from individuals as compared with corporations, there is a further difficulty, namely, that the greater is the difference between the corporate rate

and the individual surtax rate, the greater is the inducement to evade surtaxes through incorporation and failure to distribute earnings. The whole matter is further complicated by the 12½ per cent rate upon capital gains, not to mention a dozen other considerations involving corporate entity, affiliations, "realization" of income, depreciation, appreciation, depletion, etc. In short, the questions of theory and administrative expedience are involved and the law is necessarily a complex of compromises.

With respect to the automobile tax, the connection between costs of government service and benefits to taxpayers is relatively direct, so that most of Secretary Mellon's arguments appear valid. Somewhat similar arguments with respect to the taxes upon admissions do not seem so well taken. These taxes were decided by votes, however, rather than by arguments. Other tax reductions in the new law were not significant.

Of the proposals which failed, the two most important, namely, repeal of the federal estate tax and provision for publicity of income tax returns, were treated at some length in the discussion of the Revenue act of 1926.[26] Not much that is new has developed since then. The forces working for the repeal of the estate tax appear to be powerful and well financed, and the stake is large enough to encourage continued efforts. As for publicity of returns, this appears to be as abhorrent to the administration as ever. It would probably be wise and feasible to permit more state tax officials and members of Congress to have access, under proper safeguard, to individual as well as to corporate tax returns. Federal, state, and local tax administration and legislation might thus be improved without opening the returns to newspapers and the merely curious.

It is difficult for one not in actual tax administration or practice to judge the merits of all of the administrative changes. Many of them have been made at the suggestion of the Treasury and the staff of the Joint Committee. They will probably result in substantial improvement. These modifications are typical of refinements which may be expected to result from increasing administrative experience. Intensive and continuing study by the Joint Committee's staff tends, of course, to facilitate such improvement of the statute.

Among the numerous administrative changes made by the new law there is one that may, perhaps, deserve particular mention, because it may prove to have far-reaching consequences. In the text of the law this change is so unobtrusive that a layman would scarcely notice it. Its significance can be appreciated only by those familiar with the vast

[26] AMERICAN ECONOMIC REVIEW, Sept., 1926, XVI, pp. 411-418.

difficulties of federal income tax administration, and familiar also with the discussions of remedies which have taken place in the Treasury and in the committees of Congress. Reference is made to the legislative authority with respect to affiliated corporations delegated by Congress to the Commissioner of Internal Revenue. It is true that Congrss has, in previous acts authorized the Commissioner to construe the income tax law, but never before has it given him such power as in Section 141 (b) of the 1928 act. To appreciate the full force of this section, it must be read in connection with the report of the Senate Finance Committee where the inability of Congress to legislate about details is acknowledged and the recommendation of the delegation of legislative power is expressly recommended.[27]

This delegation of power fits in well with new administrative practices initiated in the Treasury. About a year ago, the Commissioner appointed a Special Advisory Committee to settle cases by compromise. The Board of Tax Appeals is being overwhelmed with litigation which is piling up faster than it is being settled. The Special Advisory Committee is made up of experienced men and is expected to prevent so many cases from going to the Board as heretofore. It does not operate on the theory that there is in every tax case one and only one exact and ascertainable figure of income of just so many dollars and cents. On the contrary, it assumes that taxable income is a determination of many fallible judgments, and that it is far better for both government and taxpayer to accept some reasonable approximation rather than to waste interminable time and expense litigating over amounts which by the nature of the case cannot be decided in terms of indisputable accuracy. This particular committee deals with controverted facts. More recently another special settlement committee has been organized in the General Counsel's office to deal with questions of law, or mixed questions of law and fact, along somewhat similar lines.

Perhaps few will deny that even more important than the further development of the statute is the development, maintenance, and proper supervision of a competent professional administrative staff,[28] both in the Bureau at Washington and in the field throughout the United States. This is a slow process, always retarded by politics both within and without the service. To say this is not to make any invidious comparisons between departments, bureaus, or administrations. But government is a matter of politics and administrators have the merits and weaknesses of most of the rest of us. The lack of a strong tradition in support of a trained and experienced administrative personnel and

[27] 70th Congress, 1st Session, report no. 960, pp. 13-15.

[28] Important matters of congestion and delay in settling tax cases were recently discussed in a paper referred to above, page 441, footnote.

the lure of opportunity in business, militate against the maintenance of an efficient and professionally spirited civil service. Furthermore, influential persons on the outside are continually wanting special consideration which politically controlled administrators cannot always disregard. We shall, however, await with some interest the development of the new experiment of delegating more responsibility to a better paid personnel. We hope that it will prove itself competent to be entrusted with even more discretion and responsibility, for here we believe lies the greatest opportunity for improvement in our federal revenue system.

Roy G. Blakey

University of Minnesota

INDUCTIVE EVIDENCE ON MARGINAL PRODUCTIVITY

Introduction

A statistical analysis of production from the standpoint of marginal productivity is a notable event; and the recent pioneer effort in this field by Professor Paul H. Douglas and Charles W. Cobb[1] is deserving of the serious attention of economists, even if they consider (as the authors of the study would probably agree) that the quantitative results are not conclusive at the stage of development which the study has at present reached. Briefly, the authors have correlated an index of physical product of manufactures with indices of laborers employed and of fixed equipment (including buildings), the last being deflated to eliminate the effect of changing prices. The indices cover the period from 1899 to 1922 inclusive. The obvious features of the trends are: a more-than-fourfold growth of capital; an increase of 61 per cent in labor; and a growth of product intermediate between the two, but much nearer the lower figure representing labor. This is in harmony with the principle of diminishing productivity, and also suggests that capital has a smaller effect than labor in determining the amount of product.

The attempt to isolate and measure the marginal efficiencies of labor and capital depends naturally on the provisional assumption that the effect of the change in the proportions of the factors is not confused by any other fundamental change taking place at the same time, and that the failure of product to keep pace with capital is due to the relative shortage of labor, just as the increase in product per laborer is due to the relative plenty of capital and not, for instance, wholly or in large part due to technical progress.[2] Viewed the other way round, this implies that if capital and labor had increased at the same rate, product would have kept exact pace with either or both of them. On this assumption, one set of figures will show the marginal efficiencies of both labor and capital, the one by its relative increase and the other by its relative decrease, these being two aspects of the same movement. Under these conditions, the amount imputed to labor plus the amount imputed to capital will always equal the whole product.[3]

[1] See Am. Econ. Rev., Supp., Mar., 1928, pp. 139-65.

[2] As we shall see later, one kind of progress acts jointly with increased capital in such a way as not to violate the conditions necessary to this type of statistical measurement of marginal productivity. Other kinds of progress do violate these conditions, and make necessary other methods if marginal productivity is to be accurately measured.

[3] This proposition has been developed in different forms by Wicksteed, Flux, Professor Cobb and the present writer. Professor F. H. Knight has raised objections

For instance, if product were consistently a mean proportional between labor and capital (the base year being 100 in each case), we should conclude—on this provisional assumption—that the influence of the two factors on product was equal. This would be expressed by the formula $P = L^{\frac{1}{2}}C^{\frac{1}{2}}$. Here the marginal effect on P of adding or subtracting an indefinitely small unit of either L or C, multiplied by the total number of such units employed, would always equal half the total P. In the present case, Professor Cobb finds the best fit given by the formula $P = L^{\frac{3}{4}}C^{\frac{1}{4}}$ (modified by an almost negligible constant), making labor's imputed share at all points three-quarters of the whole, and capital's one-quarter. Of course, as he notes, there is always the possibility that the exponents might themselves be variables, in which case the shares of labor and capital would vary correspondingly. So long as there is no evidence of such variation, the figures lend provisional support to the claims of those who have argued that total wages should increase proportionately with increases of total product.[4]

While this function is mainly governed by the long-run trend of the figures, it also shows a remarkably high coefficient of correlation with the short-time fluctuations—higher than is afforded by simple indexes such as labor alone, pig iron production alone, etc. However, in interpreting this finding we must keep in mind the fact that the Pearsonian coefficient may show perfect correlation between a series

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to an arithmetical illustration used by the present writer, though apparently agreeing with the algebraical form of the proposition. See *Jour. Pol. Econ.*, XXXIII, 550-62, Oct., 1925.

[4] It may be of interest to note the relation between the present study and the form of analysis suggested by Professor H. L. Moore ("A Theory of Economic Oscillation," *Quart. Jour. Econ.*, XLI, 1-29, Nov., 1926). Moore assumes constant exponents to represent the partial efficiencies of the different factors of production (p. 19, equations 28), and in this respect the methods are alike. They differ in that Moore does not specifically assume that the sum of these exponents is equal to unity. While this may be implied at the point where he assumes that production has reached conditions of minimum cost (p. 21), his treatment up to that point contains no such assumption. Furthermore, his proposed method of study is based on departures from trends, not on the movements of the trends themselves. While this avoids the difficulties of segregating the effects of progress, the movements it would reveal are chiefly the fluctuations of the business cycle. These clearly involve departures from the condition of minimum costs and do not, according to the contention of the present paper, follow the long-run laws of marginal productivity, which are the only ones that could be expected to govern the rewards of the factors of production. Professor Moore's method also involves separate measurement of the partial efficiencies of the different factors rather than simultaneous determination, as does Professor Cobb's formula. Professor Moore's method assumes a single industry, and he might consider it inapplicable to manufacturing as a whole; though the difference seems chiefly one of degree, as single industries contain many heterogeneous processes. It would be interesting to see what results Moore's method would give if applied to the present figures.

of large fluctuations and another of much smaller ones, provided this unequal relation is uniformly preserved.[5] In the present case the cyclical fluctuations of actual product are consistently much larger than those calculated from the formula, showing that they have a behavior of their own, markedly different from the general trend. On this fact hinges one of the three main points of the present paper: namely, an attempt to assimilate both kinds of movement into one more comprehensive formula.

Two other major matters are: the nature of the necessary allowance for those factors of production not included in the original study, and the effect of technical progress. But before proceeding to these main topics, some attention must be paid to a number of other matters which can be more briefly disposed of. No general criticism of the indexes themselves will be here attempted; but it will be assumed that they will be improved and refined as the authors continue their researches. The many-faceted issue of "social productivity versus private acquisition" will also be passed over. Suffice it for the present that technical productivity exists, and is conditioned by the shifting proportions of the "factors."

The Averaging of Diverse Cases

We must keep in mind that no single industry, except by coincidence, will show exactly the curve of productivity expressed in the national total. The aggregate is the resultant of certain industries in which capital per laborer has increased little if at all, and others in which the increase is far more than the average; also of the relative growth of certain industries in which capital per worker is naturally or necessarily large.[6] Neither of these facts has any vitiating effect on the type of study before us, but their effects are worth noting for the better understanding of the movements which this study records.

Let us express initial labor, capital and product by indexes of 100 each. Suppose 5 per cent of the product, by value, to come from an industry in which the proportion of capital to labor is four times the average, or four units of capital to one of labor. Suppose the value-products of all industries to be proportional to the costs of these factors, the costs to be proportional to the marginal productivities, and the marginal productivities to be in accord with the Cobb formula. Then the value product of one unit of labor and four units of capital should be $\frac{3}{4}$ plus $\frac{4}{4}$ or $1\frac{3}{4}$ units of value. Five value units of this same product would then require $2\frac{6}{7}$ units of labor and $11\frac{3}{7}$ units

[5] Perfect correlation requires equal deviations when each is measured in terms of the standard deviation of its own series.

[6] Since writing the above, I note that this last point is emphasized by Woodlief Thomas, Am. Econ. Rev., Supp., Mar., 1928, p. 132.

of capital. Let this industry double in size and an increase of $2\frac{6}{7}$ per cent in labor and of $11\frac{3}{7}$ per cent in capital will yield an increase of 5 per cent in value product (or in physical product as measured by the index). The percentage increase in product is equal to ¾ the percentage increase in labor plus ¼ the percentage increase in capital. For infinitesimal increments this would agree exactly with the formula $P = L^{\frac{3}{4}}C^{\frac{1}{4}}$, and for ordinary finite increments the discrepancy would be of no account. The change, then, has no material effect on marginal productivities; its chief significance is that it permits an increase in capital, relative to labor, without reducing its marginal productivity as would otherwise naturally be the case. It increases the field for employment of capital without loss of marginal efficiency.

The increase in capital has raised the marginal productivity of workers in general, but not equally throughout industry, if measured in physical goods. Yet workers of a given grade must get substantially equal wages whether working in an industry where increased capital has raised physical productivity greatly, or in one where it has had little or no effect. Hence we should expect a relative increase in the money cost of products, or of single processes, where capital has shown little growth; and a relative decline where its growth has been great. This, of course, tends to increase the incentive to combat these high costs by extending the reign of the machine to the yet unconquered provinces.[7] But this does not entirely overcome the inherent difficulties in the handicraft type of occupations. Incidentally, among the products whose relative costs and prices tend to decrease, are the machines (but not buildings) which form so large a part of capital itself.

Effect of Depreciation and Replacements

If, from figures of physical product, we are to draw inferences as to the net rewards payable to the owners of the factors of production, the necessary allowance for depreciation and replacements must be taken account of. It also has a vital bearing on the distinction between the gross product of industry as a whole and the net yield available for consumption.

To the manager weighing the economy of enlarging capital equipment, the physical results must be sufficient to compensate not only

[7] This point has a bearing on the recent controversy as to whether high wages stimulate the use of capital. The point was made that high wages resting on high productivity do not mean high costs; also that universal high wages affect the cost of machines, and hence of machine processes, equally with hand work. The fact is that a fairly universal increase in wages rests on an increase in physical productivity which is far from universal. The increased productivity, being mainly conditioned by increased capital, is unevenly distributed, and labor costs in relatively non-mechanized processes do rise, for the reason just indicated. And machines, the production of which is highly mechanized, become relatively cheaper.

for interest on the investment, but for the further expenses for maintenance, depreciation and also taxes, where taxes are levied on tangible property. And where technical progress is rapid, there is correspondly rapid obsolescence, with the result that managers frequently feel that a new type of equipment is not worth installing unless it promises to pay for itself in two years—some say one year. A rapid growth of capital per laborer calls for such frequent changes in its form as to cause rapid obsolescence of particular devices in many departments. This is not universal, but in general it is no more than safe to conclude that, of the technical "marginal product" of physical capital, not more than half is converted into net income available for interest and dividends.

Furthermore, in interpreting increased per capita product as an evidence of increased consuming power we must remember that an appreciable part of the increase consists of capital goods destined to replacements and enlargements of capital. Enlargements, of course, represent income which might, theoretically, have been consumed; but not if advances in productiveness are to be continued. So far as these elements absorb an increasing proportion of output as compared to the base year, they call for some deduction from the index of physical product in order to find the rate of increase in income really available for consumption.

The Nature of the Factors Used: Labor

The index of labor is an index of man-years, although, as Professor Douglas points out, the number of hours' work represented is subject to two changes; a downward trend in the length of the working week, and fluctuations of part-time and overtime in prosperity and depression. Granting that these movements should be taken account of when they can be accurately measured, how can this best be done? Should the labor index be deflated and made into an index of hours worked? There are conclusive reasons why this change, by itself, would be an incorrect allowance for the purpose in hand.

The fundamental cause whose effect we are studying is change in the proportion of labor to capital, manifesting itself in its "normal" or long-run fashion: namely, in equipment more adequate in character, superior in quality, more automatic. Because the worker, *when he is working*, has better equipment, his productivity, *when he is working*, is greater. If we have a plant adapted to 100 workers and double its size without changing its character, so that it now calls for 200 workers, and if we then operate it with the original 100, there has been no effective increase in the proportion of capital to labor, and we should certainly not expect the increase in product which the Cobb

formula calls for. To produce this effect the equipment must be adapted to the new proportion so that the additional amount will be effectively employed and not standing idle. Or if the original plant is worked half-time, here again is no doubling of the proportion of capital to labor, *when working*. A shorter work-day may increase productiveness per hour; but this is due to a different cause from increased equipment per worker, and presumably follows a different law.

It appears, then, that the "proportion of factors" is best measured by the ratio of capital to the number of workers to which it is adapted; or to number of workers employed when working at normal percentage of capacity. Since this last percentage does not change much in the long run, the ratio of capital to laborers actually employed is a satisfactory index for long-run purposes, with one qualification. Two or three laborers working in successive shifts should, in strictness, be counted as one worker for this purpose. Otherwise a plant working three shifts would appear to give each worker only one-third as much capital to work with as an identical plant working one shift. The substitution of three shifts for two in the steel mills created a slight fictitious decrease in the proportion of capital to labor, and any general tendency toward substituting continuous operation with shifts for ordinary daytime operation would have the same effect. In the present state of the development of this research, these errors are probably not important, though with greater refinement of the indexes they might have to be taken into account.

What, then, should be done about the trend to a shorter working week? Is it fair to gauge the effect of our vast increases in capital by a 30 per cent increase in product per worker without allowing for the handicap of a 16 per cent decrease in hours per week?[8] A perfect answer calls for more knowledge than we have of the causes, nature and results of this shortened work-week in itself. Is it mainly a way, as productive power increases, of taking only part of the gain in the form of more goods, and the rest in leisure? Then we should certainly use product per hour instead of per year to measure the increased productiveness due to capital. Or is the shorter week in itself as productive, other things equal, as the longer? Then product per year is the proper measure. Or—as is more plausible—has the shorter week been made necessary (and not unprofitable) by the use of intensive speeding methods, or by the added strain resulting from the use of more elaborate machinery? Then again we should gauge the productiveness of these methods under the shorter week which their use

[8] The figure of 30 per cent is taken, not from actual product, but from the "calculated product" of the Cobb formula, representing the trend of product in relation to labor and capital. The figure of 16 per cent is based on a provisional estimate by Professor Douglas, subject to correction.

makes necessary, comparing it on equal terms with the longer week which was possible under former conditions: that is, using annual or weekly product with no allowance for shortened hours.

The facts are undoubtedly a mixture of all these conditions, and the proper assumption lies somewhere between these two extremes—but where? Lacking data for a quantitative answer to this question, or even as yet for constructing a reliable index of production per hour, Professor Douglas has followed the only practicable course; but we should recognize clearly that the result minimizes the effect of increased capital in increasing output. By making no allowance for the handicap of the shortened week, it gives capital too little credit for increased output. If, for example, the standard working week was shortened by 16 per cent from 1899 to 1922, and this had the effect of making product per standard week 9 per cent less than it would otherwise have been, then an index of increased product *due to increased labor and capital as separate causes*, should lie, for 1922, $\frac{9}{91}$ or virtually 10 per cent above the index of yearly production.

Part-time and overtime raise a different question. Lacking data to the contrary, we may provisionally assume that they show no general upward or downward trend throughout the period, but merely fluctuate with the business cycle. They involve no change in the character of equipment, or in the effective proportion of capital to labor as defined above. They affect output, and are meant to do so, but for a different reason and presumably according to a different quantitative law. They reinforce the cyclical fluctuations in numbers employed, and the two effects are merged in the aggregate statistics.

We should naturally expect a 1 per cent increase in numbers employed in a given fixed plant to increase output by more than 1 per cent (indirect labor being relatively "constant"), while a 1 per cent increase in hours worked, relative to the standard week, would naturally increase output somewhat less than 1 per cent. Changes in numbers are greater,[9] and their effect is predominant. The indexes in the present study, showing only changes in numbers employed, serve to exaggerate slightly their effect on output by adding the effect of the unrecorded changes in part-time and overtime.

The Nature of the Factors Used: Capital

With reference to capital a more serious objection is likely to arise: namely, that the various elements of equipment can only be added together in terms of their prices, which depend on their productivities

[9] The study of W. I. King, *Employment, Hours and Earnings in Prosperity and Depression*, pp. 47-53, 83, indicates that part-time in the depression of 1921 was slight; but this finding cannot be regarded as conclusive for all cases.

and hence cannot be used to explain productivity without circular reasoning. One possible answer is simply that we have here certain observed uniformities of behavior, and there can be no circular reasoning in the mere inductive process of analyzing the behavior as observed. Indeed, circular reasoning in the sense used above appears to be a concept alien to the realm of the inductive student. He must translate it into other terms. "Is a phenomenon self-determining or indeterminate so far as concerns the causes under investigation?" If so, its behavior should afford evidence of that fact. In the present case, the evidence points strongly to a causal connection between supply of capital as measured in the index and output of commodities. A theoretical interpretation of this relation presents difficulties, but these do not vitiate the inductive portion of the study.

Sensitiveness of Results to Errors or Adjustments in the Indices

In any such study as this, an important question is: How sensitive are the results to possible error or bias in the data used? In this case they are decidedly sensitive. The relative shares attributed to labor and capital are materially affected by including or excluding the decidedly abnormal years of war and post-war adjustment. As we shall see later, if the production index were converted to a basis of product per hour, this, together with the exclusion of the war years, would bring the imputed product of capital up to approximately half the total. Evidently the indices must reach a high degree of accuracy before the marginal shares of the factors can be regarded as closely measured.

One bias in the figures is worth noting, though it affects only the cyclical fluctuations and not the long-run trend. The method of computing changes in capital in the inter-census years seems to be such as to minimize fluctuations. These interpolations are made on the basis of output of certain commodities entering into capital equipment. But these commodities enter also into consumption goods, and into maintenance and replacements, none of which fluctuates as much as additions chargeable to new capital. Indeed, for the purpose in hand we should be justified in disregarding fluctuations in maintenance and replacements, or deducting skimped maintenance and postponed replacements from the nominal increase of capital. The index shows a surprisingly steady growth, even in years of deepest depression; but this must be taken as subject to a heavy discount.

The Shares of Land and Working Capital

So far we have not questioned the limitation of capital to buildings and equipment. But any final interpretation, even of the purely tech-

nical phases of production, must take account also of land and of working capital, the relevant portion of which consists mainly of goods in process. Land is frequently thought of as different from the other factors in that they vary in amount and have a marginal productivity, while land remains fixed in quantity and has no marginal productivity of its own, but receives the remainder of product above the marginal productivities of the other factors. This difference, however, is only apparent. The fact that more intensive production on a fixed area of land is subject to diminishing returns carries with it the corollary that any producer who can secure more land to utilize with a given amount of the other factors will thereby be partially freed from the diminishing returns to which he has been subject, and his yield will hence be increased. This increase is the marginal product of land, and is mathematically identical with the residual share figured in the traditional way.

It becomes larger as a result of growth of the other factors, and land thus receives an "unearned increment;" but this increment takes the form of an increase in its marginal efficiency. So also does labor receive an unearned increment, in the same form, as capital per worker increases. Indeed, with reference to manufactures, land presents quantitative characteristics similar to those of labor, but more marked. It increases, though presumably less than labor, and at a unit price which increases faster than wages.

The chief difficulty in dealing with land is probably the lack of adequate statistics. Such figures as are gathered show neither acreage nor current value, but book values which range from original cost at some uncertain past date to something approaching current market value. Even if better figures were available, they would be complicated by the fact that excess land is often held to provide for future growth, in which case present physical output would show no visible effects from limited land supply; and land would be an "overhead cost" like any form of fixed equipment which has perpetual excess capacity and no marginal productivity. So far as land exerts any limiting effect on physical output, the result is to make the increase of product slightly less than it would be if labor and fixed capital were the only limiting factors. Fortunately this effect, in manufactures, is very small. Perhaps the simplest device is merely to reckon that, in order to use more labor and capital effectively, certain amounts of added land are necessary, and total capital must be enough for both purposes.

Goods in process would naturally be expected to behave differently from either labor or equipment. One fairly plausible assumption could be made without disturbing the form of function already used for these two factors by Professor Cobb. Assume that, in order to increase

product, goods in process must be increased in the same ratio as product, no more and no less. They would then have no marginal productivity in the ordinary sense, since an excess of 1 per cent would be totally useless, while a deficiency of 1 per cent would decrease product 1 per cent and render some of the other factors totally useless. But this would affect the form of the productivity curve for capital as a whole by adding, to the element that must increase as the fourth power of product, another that need only increase as the first power; so that capital as a whole need not increase by as large a percentage in order to produce a given increase in output. Or, putting it the other way round, a given percentage increase in total capital would give rise to a larger percentage increase in fixed capital, and so would have a larger marginal productivity than the Cobb formula shows for fixed capital alone. This excess would be greatest when capital was scarcest; since then the largest proportion would be absorbed by goods in process and the scarcity of fixed capital would be intensified. Throughout, however, this modified function would still fulfill the condition that N times *all* the factors would yield N times the product.

On this basis the present writer has made a rough calculation, assuming that the Cobb formula is correct for fixed capital, and also that goods in process are equal to product, which seems not too far from the facts.[10] The imputed share of fixed capital plus goods in process is then found to vary from about 46 per cent to about 38 per cent of the whole, as capital grows from the proportions of 1899 to those of 1922. This indicates the direction of the modifications required to adapt the Cobb formula to take account of goods in process, but exaggerates the amount of the correction, in all probability, since the assumption on which it is based exaggerates the peculiarity of the behavior of goods in process. The calculation is of some theoretical interest, since it illustrates how the marginal productivity of a composite "factor production" may be quite elastic in character, even though some of the elements of which it is composed must work in absolutely rigid proportions, and in themselves have no "marginal productivity" in the ordinary sense. If goods in process necessarily increase more than product, they could be analyzed into one component varying with product and another varying as fixed capital does.

Cyclical Fluctuations

As already noted, the short-run fluctuations of the figures follow a different law from that governing the long-run trend. Analyzing

[10] The method used was to treat product arbitrarily as the independent variable, calculating the total capital necessary to various values of P, graphing the results and measuring the slope of the curve. This gives, of course, only an approximation.

the years 1903 to 1922 into six cycles of recession and recovery, we find that in six recoveries an average increase of 13.2 per cent in labor, with an average increase of 12.8 per cent in capital, was accompanied by an average increase of 23.4 per cent in product. In six recessions, an average decrease of 8.43 per cent in labor, with an average *increase* of 7.22 per cent in capital, was accompanied by an average decrease of 10.2 per cent in product. This seemingly strange behavior accords fairly well with the equation: $P = L^{5/4}C^{1/4}$, though of course this expression would depart widely from the long-run trend. Before attempting to find an expression which will harmonize these two types of movement, we should study the theory of the situation, asking ourselves what kind of behavior it is rational to expect.

During depressions, increased capital in staple lines of production is useless so far as it merely increases productive capacity, and has a "marginal productivity" only to the extent that it takes improved forms and gives the remaining labor better instruments to work with, thus reducing labor costs. It is impossible to measure the amount of capital going into such improved forms every year, and the best that can be done is to assume that it follows the general trend of increase in capital relative to labor, and not the cyclical fluctuations. In recoveries, excess capacity installed during the previous depression comes into use; also some inefficient instruments and ultimately some that are obsolete except for emergency purposes.

The peculiar behavior of product during cyclical fluctuations is due to changes in the percentage utilization of plant capacity; or, what is roughly equivalent, in the ratio of labor employed to the labor the plants are adapted to work with. Since part of the labor is "indirect" and relatively constant with reference to such short-time fluctuations, we should naturally expect that fluctuations of product would be greater than those of labor, an inference which is borne out by the figures.

The problem is, then, to find an index of "normal" labor relative to the capacity of the equipment in existence in each year; as a base from which to gauge the effect of the business cycle. This the present writer has attempted by constructing 7-year moving averages (arithmetic) of labor and capital, and taking the ratios between these trend-lines for each year. These ratios are taken to represent (very imperfectly) the changing "normal" ratio of labor to capital in terms of the changing technique of the times. Applying these ratios to the figures of actual capital for each year, we have a figure representing approximately the labor employed when existing plants are working at "normal" per cent of capacity. This variable appears in the subsequent formula as L_n.

We should naturally expect that, when labor was above this normal figure, product would be above the Cobb formula, and *vice versa.* Inspecting the figures with this as a key, it was at once evident that the years 1917-1919 were peculiar in that, while labor was above normal, product fell below the Cobb formula instead of rising above it; while the rest of the period behaved substantially according to expectations.[11] During the war the violent shifts of production caused wasteful utilization of capital and dilution of labor with green workers, and other unfavorable conditions tending to prevent full employment

Year	L	L_n	$L^{2/3}C^{1/3}\left(\frac{L}{L_n}\right)^{.65}$	$1.01\ L^{2/3}C^{1/3}$	P
1899	100			101	100
1900	105			107	101
1901	110			112	112
1902	118	113	122.7	121	122
1903	123	118	129	127	124
1904	116	120	120.6	124	122
1905	125	122	134.3	134	143
1906	133	128	145.9	144	152
1907	138	133	153.6	151	151
1908	121	135	130	141	126
1909	140	140	157.2	159	153
1910	144	143	163.3	164	159
1911	145	144	166.7	167	153
1912	152	147	177.4	175	177
1913	154	150	180.5	179	184
1914	149	151	174	177	169
1915	154	160	180.1	187	189
1916	182	171	225.6	219	225
1917	196	184	243.9	237	227
1918	200	187	255.3	247	223
1919	193	187	248.6	246	218
1920	193			250	231
1921	147			210	179
1922	161			226	240

from having its usual effect. It is evident that any treatment of this variable which accurately expresses its effect in pre-war years will have precisely the opposite effect for 1917-1920. Under the circumstances it is clearly justifiable to consider the war years abnormal and construct a formula with reference to pre-war years only. And as Professor Cobb finds that $P=101\ L^{2/3}C^{1/3}$ fits the pre-war years better than $P=101\ L^{3/4}C^{1/4}$, the exponents ⅓ and ⅔ may be used to express the general trend of the figures.

Thus a formula was constructed as follows: $P=L^{2/3}C^{1/3}\quad (L/L_n{}^m$. Analysis of the figures indicated .65 as the most probable value for

[11] Using $L^{2/3}C^{1/3}$ to represent P' (for reasons given below), the coefficient of correlation between P/P' and L/L_n is plus .57. This is not very high, but the nature of the test is so severe as virtually to preclude very high correlation. Using a "normal" P' in which L_n is substituted for L, a much higher correlation would result.

m.[12] This formula may be converted into the equivalent form: $P = L_n^{2/3} C^{1/3} (L/L_n)^{(2/3+.65)}$ as expressing better the fact of a "normal" trend multiplied by a factor which intensifies its cyclical fluctuations. The first form happens to save some labor of computation. The results appear in the accompanying table.

For the years on which it is based—1902-1916, inclusive—the modified formula (column 4) affords a materially better fit to observed product (column 6) than does the Cobb formula (column 5), substantially reducing the sum of the squared errors. It fits better because of the increased amplitude of its cyclical fluctuations, approximating the amplitude of these fluctuations in the observed product, instead of having a consistently smaller amplitude as does the Cobb formula. This fact entitles the modified formula to serious consideration despite the fact that for certain years its fit is poorer. For 1917-1919 the original formula is too high and the modified one even more so. This may be taken as bringing into sharper relief the fact that production during these disturbed years was abnormally costly; labor and capital yielding less than they would ordinarily have done. Further evidence is afforded by events subsequent to 1922 when, with virtually stationary employment of labor, product rose so much that it seems certain to have risen above the level of $1.01\ L^{2/3}C^{1/3}$. All the more reason for not allowing these few abnormal years to pull the formula downward.

The compound formula tested above has very interesting properties. Under it, product is the resultant of two types of movement, on two scales. One is governed by capital and "normal" labor for that amount of capital. Movements of actual labor register on this scale if the ratio of actual labor to "normal" remains unchanged. The other scale is the ratio of actual labor to "normal." With reference to movements on the first scale, the imputed share of labor is $2/3$ of total product, and that of capital $1/3$. With reference to movements on the second scale, the imputed share of labor is more than the total

[12] This figure was secured from a trial-and-error search for the value which would meet the test of "least squares." It is sufficiently accurate for the purpose in hand, as any variation between .6 and .7 has no material effect on the results. In the second form of the equation this exponent becomes $2/3 + .65$ or 1.31666—. This may be written as 1.3 for all present purposes. The disappearance of the constant 1.01 from the Cobb formula is due to the fact that the method of computing L_n introduced an upward trend averaging very nearly 1 per cent. Other methods, such as geometric moving averages, would alter this.

Obviously, increased employment could not increase output indefinitely without regard to the limits of the capacity of the plants; and as the limit is approached it is natural to expect a certain tapering off of productivity per laborer. The formula used does not provide for this, but for the data studied the omission does not seem serious except for the war period; and here its effect is lost in that of other and greater disturbances.

product and that of capital less than zero. In other words, if part of the unused capacity were wiped out and the indirect outlays on its account saved, or if some plants were closed and their quota of labor concentrated in the remaining plants, product would be increased and not diminished (so long as the capacity of the remaining plants is not overtaxed). This result agrees with the common sense of the business man, and is precisely what the theory of overhead costs would lead one to expect.

This is true, be it noted, only of changes in the amount of capital without changes in the form it takes. An increase of capital which takes the shape of giving existing labor better equipment still has a marginal productivity, represented by $C^{1/3}$ in the formula which also assumes, for lack of better indication, that this kind of change takes place at the rate measured by the 7-year moving averages of capital and labor.

In showing how the formula leads to these results, it will be permissible, for simplicity in handling the fractional exponents, to express the basic equation as $P=L^{.67}C^{.33}\,(L/L_n)^{.63}$ or its equivalent $P=L_n^{.67}C^{.33}\,(L/L_n)^{1.3}$. These both reduce to $P=L^{1.3}C^{.33}/L_n^{.63}$. If now we let L_t and C_t represent the 7-year moving averages, or trends, of L and C; from which L_n was computed, we may substitute for L_n its actual value $(L_t/C_t)C$. This gives us

$$P=\frac{L^{1.3}C^{.33}}{\left(\frac{L_t}{C_t}C\right)^{.63}} \qquad or \qquad P=\frac{L^{1.3}C_t^{.63}}{L_t^{.63}C^{.3}}.$$

Before accepting these quantitative results or giving them final interpretation, we must consider some of the more obvious limitations of the data. There are two corrections to be made, both of uncertain amount but, unfortunately, in opposite directions. First we must remember that the growth of actual capital fluctuates somewhat more than the index shows. Correction for this would increase the fluctuations of L_n, and reduce the deviations of L/L_n from unity. As a result, a larger exponent would need to be applied to this factor. Secondly, as we have seen, part of the cyclical variation of product is due to the unrecorded variations in hours worked per worker; variations of numbers alone would not have such large effects on product. A more adequate formula would be $P=L_n^{.67}C^{.33}\,(L/L_n)^p(H/H_n)^q$, where H represents actual hours worked per worker and H_n represents either standard hours or a normal departure from standard (a constant might need to be introduced into this factor). The exponent p might be somewhat less than 1.3 but would assuredly be greater than 1; while the exponent q would naturally be somewhat less than 1. In

the present state of the available data, these refinements need not concern us.

One further possibility may be of interest. If it should happen—as is unlikely—that the whole expression were found to vary approximately as total hours worked relative to normal hours worked, then this latter ratio might be taken as an index of the degree of employment of capital. In this case the whole formula could be put in the form: $P=L_h^{3/4}C_e^{1/4}$, where L_h measures labor in terms of hours, and C_e represents capital multiplied by its degree of employment, or employed capital as distinct from total capital. This latter conception is, however, of doubtful or arbitrary meaning. And while the resulting expression might serve as an interpretative commentary, it would be of no help in the actual work of computation or prediction.

What is the ultimate result of this analysis of cyclical fluctuations? So far as concerns the marginal productivity theory of distribution, it has very little bearing. The less-than-zero marginal productivity of capital refers to fixed capital only, to fixed capital put to certain uses only, and only during a depression. And even so it may be good business to put fixed capital in these temporarily useless forms, by way of preparing for future growth at a time when construction is cheap. And the fact that the imputed share of labor (with reference to changes in the "capacity factor" only) may be greater than the whole, can obviously not be made the basis of any permanent system of paying wages, even when qualified by the need of sharing income with the working capital which is jointly necessary. There are times when wages and the payments for working capital may absorb virtually the entire income of a business, but this results from a fall in gross income rather than from a rise in the distributive shares. These latter appear to be governed by longer-run forces, including those represented by the original Cobb formula. As to the accuracy of the measure which this formula affords, judgment must be reserved until we have looked at the effect of one more major disturbing element: namely, technical progress.

Technical Progress

One of the striking things in this study as presented is the fact that it seems to allow no room for the natural effect of advances in the "state of the arts." To one accustomed to crediting our increase in per capita output to the triumphs of inventive genius, it must be a rude shock to see the whole increase calmly attributed to increased capital; while even on this basis the share of capital is only one-fourth of the whole, which seems too modest to leave room for any deductions. What, then, has become of our boasted progress? Has it totally

evaporated? This question places the student in an interesting dilemma. For purposes of isolating the marginal yields of the factors of production, progress is a disturbing force, and we should like to get rid of it, or at least to isolate it, in the interest of accurate imputation. But this scientific interest is hardly enough to make us glad to see progress eliminated from real life.

The answer to the problem is twofold. In the first place, adjustments in the data will alter the story they tell, and in the second place, the formula employed to measure marginal productivity in itself conceals the effects of a vast deal of technical advance. Let us take up the second matter first.

It has already been pointed out that, to find productive uses for such a vast increase in capital, it must be put in new forms. Were all these forms, and their productive possibilities, known in 1899? Of course not. There was then, and is now, a frontier zone of known devices just below the margin of economical use and capable of absorbing a considerable amount of capital if relative costs should become more favorable. But to find uses for a fourfold increase in equipment, or 2⅔ times the original amount per worker, this frontier zone has had to be pushed forward rapidly and continuously. At no time do definitely known and developed devices include more than a small part of those which would be found profitable if a shift in relative costs should give manufacturers a substantial incentive for further search. The increasing labor-cost of any process not thoroughly mechanized has afforded such an incentive; and it is typical of present-day methods of management to set a research department to work definitely on the problem created by changing cost conditions. The result is that any such change will call forth a crop of new devices or cause others to be quickly developed which would otherwise have been very slow in getting past the experimental stage.

These facts may be summed up by saying that the product attributable to added capital is also attributable to progress. Both are necessary to it. In a sense, the technical improvements may be said to have brought a deal of the new capital into being. They have enlarged the field of profitable investment. The prospective gains have caused manufacturers to go into the investment market to raise added capital, while the realized gains have furnished a painless source whence much of the necessary savings could come. With the modern credit system, making new equipment "pay for itself" is far more than a figure of speech.

Industry has had to evolve not merely increasingly automatic machinery, but also new commodities into which to put the increasing productive power without wasting it in a mere redundancy of familiar

goods. What difference, for example, would it have made if the pleasure automobile had never been invented?

Among the new devices some may be close to the margin of economical use, but others are extremely profitable, creating uses for capital well above the existing margin. To the extent that this happens, the historical increase in aggregate product is not an accurate index of the marginal product of capital either before or after the introduction of the improvement. The change makes the marginal product higher than it would otherwise have been, and also adds to the supra-marginal product; and the mass statistics we are studying cannot segregate these two components. There are, of course, some inventions which require no added capital, or which save capital as well as labor; and there are improvements in method which take effect on labor directly. All these, including new supra-marginal uses of capital, may perhaps be called "pure progress" to distinguish them from those whose effects are merged in the marginal yield of added capital.

"Pure progress" is not the creation of labor or capital, but its result is to increase the marginal product of labor or capital or both, in the enterprises where the improvements have been made. For the time being, the gain goes as differential profits to the entrepreneurs, while the marginal product which governs distribution is marginal product under the less advanced standard practice of "representative concerns." But as soon as new processes become standard practice, labor and capital absorb the benefits, or most of them, either through increased wages, increased payments for capital goods or capital funds, or reduced prices which make the incomes of workers and capitalists buy more goods.

Capital and labor are both dependent on the "state of the arts," but the observed facts do not indicate that capital alone "corners" the results of current progress, still less the "wisdom of the ancients" as Veblen has suggested. Capital absorbs part of the effects, but labor absorbs still more, and this is definitely borne out by the figures before us.

In inquiring whether these figures afford any evidence of the existence of "pure progress," the only available method seems to be to make all reasonable adjustments in the direction which would tend to indicate such progress, and then see if the resulting trend of product is higher, relative to those of labor and capital, than can be plausibly explained by the action of labor and capital alone.

In the first place, we have seen that a formula assigning one-third, instead of one-fourth, to capital is more representative if the years 1917-1919 are disregarded as an abnormal interlude. But the most

substantial need of adjustment arises from the fact that from 1899 to 1922 the length of the standard working week was quite steadily decreasing, so much so that the same product per worker would represent approximately 16 per cent more product per standard hour at the end of the period than at the beginning.

Two questions arise: first, is not this a true increase in productiveness or productive efficiency of the whole manufacturing process, over and above that recorded in aggregate product? And second, should not this extra increase in productiveness be taken account of in gauging the relative contributions of labor and capital? To the first question the answer is clearly "yes." To answer the second, we must first know whether, or to what extent, this increased productiveness per hour is due to the shortened hours themselves; in which case it is not relevant evidence of the marginal contributions of either capital or labor.

If the shorter week is, in itself, as productive as the longer, then the increased product per hour should properly be ignored in searching for the differentials due to labor and capital as such. On the other hand, if dropping eight hours from the standard week involves a clear sacrifice of just so much power to produce, then merely to counteract this loss requires added efficiency, to be credited presumably either to added capital or to "pure progress." In this case, the production index should be converted into an index of production per standard hour, and would rise to about 278 in 1922 instead of 240. The trend of product would be close to a mean proportional between that of labor and that of capital, indicating an imputed share of 50 per cent for each. Or if we "split the difference" and consider that the shortened work-week is one-half made up for by its own effects in increasing speed of output, then the adjusted index would result in attributing approximately 60 per cent to labor and 40 per cent to capital. This is perhaps the most plausible compromise.

This is a suspiciously large share to attribute to capital, suggesting strongly that capital is getting credit properly due to some other agency. Remembering that we are dealing with less than half of total capital, its owners can hardly receive as much as 14 per cent of total net income. Its cost to the enterprise, including depreciation and taxes, is presumably less than 25 per cent of the total "value added to materials." If it "produces" slightly more than it costs, its product would be about one-fourth of the whole. The discrepancy, as of 1922, between $L^{3/4}C^{1/4}$, and $L^{.6}C^{.4}$, amounts to about 15 per cent; and this may be taken as one out of many possible estimates of the amount of "pure progress" during these twenty-three years.

In coming to this conclusion we have, it will be noted, shifted from the statistical gauge of marginal productivity, in order to have some basis from which to judge the plausibility of its results; and have fallen back on the tautological device of judging the marginal contributions of the factors by what they receive, or by what they cost. In other words, to just the extent that we attempt to take account of the disturbing factor of progress, the index of marginal product derived from the historical trends of mass statistics inevitably fails us. Other statistical approaches may be found which will partially overcome this difficulty, such as comparative studies of the simultaneous costs of different methods of production in representative industries. Fifteen per cent is not a large allowance for progress; but it becomes sufficiently liberal when we remember that presumably the major part of our technical advance is already accounted for as merged in the marginal product of increased capital per worker. At any rate, the figures do not force us to conclude that technical progress is wholly an illusion!

Conclusion

To sum up, the study before us is a bold and significant piece of pioneer work in a hitherto neglected field. While it leaves out parts of capital, there seems to be a statistical possibility of enlarging it so as to take account of them. Some account can be taken of the fluctuations of the business cycle; and so far as this analysis has been carried in the present paper, it agrees with what the theory of overhead costs would lead one to expect. Even the disturbing effects of progress do not make the task absolutely hopeless. The difficulties are great, and it appears that the whole story cannot be told by the historical trends of mass statistics. These need to be supplemented by other types of evidence, which may help to segregate the yields of capital and labor as such from the effects of technical progress. One vital service of such a study is to force the theorist to formulate his theory in wholly concrete terms.

J. M. Clark

Columbia University

THE PLIGHT OF THE LANCASHIRE COTTON INDUSTRY

According to the *New Statesman*, the "fate of an ancient industry" is at stake. For over seven years the famous cotton industry of Lancashire has suffered a "spell of bad trade" which has been equalled only by the depression caused by the cotton famine of Civil War days. At first it was thought that its troubles were similar to those of other British industries following the post armistice boom; and Lancashire men were content to "grin and bide" as the saying goes in that country. By 1926, however, it was realized that the cotton industry, England's greatest export industry, was facing difficult and menacing problems which demanded radical action.

Although world consumption of cotton goods has remained about stationary as compared with 1909-1913, the spinning capacity of the world has increased 14 per cent[1] while the amount of world trade in yarns has fallen 23 per cent and in piece goods 5 per cent. Since four-fifths of Lancashire products are exported, it is only natural that these changes would affect British industry. According to a study made by Professor G. W. Daniels and Mr. John Jewkes, exports of piece goods based upon weight and yardage have fallen to two-thirds of their pre-war volume, and exports of yarn have fallen off about 25 per cent.[2] Moreover, British producers have not only suffered from the general decline in the export market but in the case of piece goods they have lost in relative position, exporting in 1923-1925 only 50.5 per cent of the total world exports, whereas in 1909-1913 they exported 69.9 per cent.[3]

EXPORTS OF PIECE GOODS
Metric tons

Countries	Average 1909-13	Average 1923-25	Per cent	Per cent
United Kingdom	536,837	369,111	69.9	50.5
United States	33,465	42,588	4.4	5.8
Italy	42,910	58,350	5.6	8.0
France	44,324[4]	45,374	5.8	6.2
Japan	10,336[5]	84,188	1.3	11.5
Czechoslovakia		31,082		4.2
India	12,728	18,674	1.7	2.6
Other Principal Countries	87,103	81,348	11.3	11.2
	767,703		100.0	100.0

[1] *Economic and Financial Section of the League of Nations, Memorandum on Cotton* (1927), pp. 7, 30-31.

[2] *London Times*, September 6, 1927.

[3] *Economic and Financial Section of the League of Nations, op. cit.*, p. 31.

[4] 1913 only.

[5] Average for 1910-11 only.

A study of the export figures in the following table shows that the losses have been in the Far East which took 56 per cent less in yardage in 1925 than in 1913. At first it was thought that the drop was due

EXPORTS OF PIECE GOODS FROM THE UNITED KINGDOM[6]

Markets	Thousand yds. 1913	1925 percentage of 1913
Far East	4,357,711	44
Near East	721,420	91
South America	672,864	83
Self-governing Dominions	393,220	81
Europe	269,774	130
Africa	333,243	105
United States	44,415	199

to the decreased purchasing power of the agricultural peoples of India and the disturbed political conditions of China; but an analysis of figures now available shows that the consumption of cotton cloth in India for the years 1922-1926 dropped only 7 per cent below pre-war consumption, whereas the imports dropped 44 per cent and the consumption of Indian mill-produced cloth less exports and hand-loom cloth increased 63 per cent and 16 per cent over the years 1910-1914. In China there was an increase of 31 per cent in the consumption of cotton cloth during 1922-24 over 1909-1913 accompanied by a 14 per cent reduction of imports.[7] To make matters worse, the Japanese, whose cotton industry has increased about 133 per cent since 1913, have claimed an increasing share of the diminishing imports. According to figures of W. B. Cunningham, the British Consul, Japanese exports to China during 1921-1925 increased in value 33 per cent over the period 1916-1920 and the exports to British India increased 22 per cent.[8]

A combination of cheap, native grown cotton, cheap labor, cheap coal and modern mills working under few regulations makes the cost of production in these countries the lowest in the world. In addition, the Japanese industry has developed along lines of mass production and is highly concentrated, having a comparatively small number of large, powerful firms most of which are affiliated with the Japan Cotton Spinners' Association. The natural suitability of the country, combined with the excellence of the organization and management and the

[6] *Economic and Financial Section of the League of Nations, op. cit.*, p. 33 (adapted).

[7] *Economic and Financial Section of the League of Nations, op. cit.*, pp. 17-19. In China mill produced cloth increased from 10,000,000 lbs. to 27,000,000 and hand loom cloth from 570,000,000 to 870,000,000.

[8] W. B. Cunningham, *Report on the Cotton Spinning and Weaving Industry in Japan, 1925-26* (1927), Department of Overseas Trade, pp. 17, 44.

twenty-hour day, have placed the cotton industry of Japan in an enviable position.

There have been marked losses also in Egypt[9] in which Italy gained a strong footing during the depreciation of the lira and in which Japan, France and Belgium have shown increasing strength, and in South America due both to the increased production of Brazil and the competition of the United States. The only favorable markets seem to be those of Germany and the Netherlands which have increased their purchases of yarn.

Since there can be no question with regard to the skill of the Lancashire spinners and weavers or the quality of the Lancashire goods, famed the world over, the immediate problem is one of price—how to secure the fatal 10 per cent reduction in cost to meet present competitive conditions; but the more far-reaching problem for the future is the possibility of a change in the character of the products in the medium and coarse spinning sections, necessitated by the increase in world spindleage, if Lancashire textiles are to maintain their export position.

In order to understand the dilemma which is confronting the producers, it is necessary to review the organization of the cotton industry in Lancashire. As the oldest center for machine-made cotton goods, the home of Hargreaves, Arkwright and Crompton, it has acquired a proud tradition which is shared by employers, investors and operatives who have with their ancestors been born and bred in the industry. Nowhere have the shibboleths of *laissez faire* clung with such persistence until Lancashire individualism has become a byword, an individualism which has been a weakness in the present crisis, but which may become a source of strength if it is capable of transference to group pride.

One of the unique characteristics of the industry is its complete separation from the source of its raw material which has to be brought from the United States, India, Egypt and other parts of Africa, and which is subject to the costs of merchanting as well as transportation. There has been practically no tendency toward vertical combination and the industry is stratified on the horizontal principle, having three main divisions: spinning, manufacturing or weaving and finishing (bleaching, dyeing and printing). The spinners who operate over one-third of the world's spindles are divided into three classes according to whether they spin coarse, medium or fine counts. The fine spinning section is located at Bolton and uses Egyptian cotton. It employs about one-third of the machinery and has maintained a fairly prosperous condition with no systematic short-time running, due to its successful combination of artificial silk with the fine quality cotton yarns.

[9] E. H. Mulock, *Report of the Economic and Financial Situation in Egypt* (1927), Department of Overseas Trade, pp. 25-27.

The spinners who handle the American cotton are centered around Oldham. Blackburn and Burnley are the chief manufacturing towns with 800,000–900,000 looms, while Manchester with its great warehouses is the sales and financial center. Recently Manchester has opened a new spot market in competition with the spot market at Liverpool over which there is a lively local dispute caused by the refusal of the Liverpool market to allow its members to exhibit samples on the Manchester market. As the unloading of cotton in Manchester and its purchase there means a saving in freight estimated as high as £500 a year for a single Oldham firm, there is little doubt that the Manchester market will be supported.

Both employers and operatives are organized on craft lines and are accustomed to confer with one another.[10] In addition to their separate trade unions, the operatives have formed the Under Textile Workers' Association which unites them all for certain general purposes and which in the present crisis is the pivotal organization for the workers.[11]

Except for the associations in the finishing trades, the employers' organizations have no compulsory power over their members and rely upon their loyalty for any concerted action, a slender reed in a life and death struggle. The associations in the finishing trades, however, have become quasi-monopolistic combines and have adopted such a suc-

[10] Fairly good industrial relations have been maintained even during the last year under the Brooklands Agreement of 1923 which provided for arbitration.

[11] Employers' associations:

Raw cotton: The Liverpool Cotton Association and the Manchester Cotton Association.

Spinning: The Bolton, Manchester, Oldham and other Master Spinners' Associations which are affiliated to the Federation of Master Spinners' Associations, and the Cotton Yarn Association.

Weaving: The Bolton, Manchester, Oldham and other Manufacturers' Associations which are affiliated to the Cotton Spinners' and Manufacturers' Association.

Finishing: The Bleaching Trade Advisory Board, the Federation of Calico Printers, the Piece Dyers' Association which are affiliated to the Allied Association of Bleachers, Dyers and Finishers.

Selling: Home Trade Section of the Manchester Chamber of Commerce, the Wholesale Textile Association, the Master Packers' Association and the Shipping Merchants' Committee of the Manchester Chamber of Commerce.

Operatives' organizations:

Operative Spinners' Amalgamation.
Card and Blowing Room Amalgamation.
Weavers' Association.

Blowers', Beamers', and Twisters' Amalgamation.
National Union of Overlookers.
Warp Dressers' Amalgamation.
Warehousemen's Association.

cessful method of fixing prices through agreed price lists that during the last five years they have paid dividends ranging from 7½ per cent to 20 per cent without the bonuses while the other trades were figuring how to meet their losses.[12]

The financial structure of the industry is both characteristic and unusual in its attempts to localize the financial interests and to interest employees in the business through financial participation. It has been the custom to issue a rather large capital but to call up only about 25 per cent with the general understanding that no further payment would be required, a policy which has resulted in many shareholders purchasing stock with no possibility of paying for it in full. In the prosperous years it has meant exorbitant dividends on actual investments. The balance of the working capital has been raised by loan money on call which has been a popular form of investment among the operatives and by bank overdrafts. Loanholders have been encouraged to invest small amounts as they would in a savings bank with the privilege of withdrawal on demand. In dull times the practice has greatly overburdened the industry with interest charges which have had to be paid out of capital. In the case of 194 firms which were studied, there was a debt of 16s. per spindle to loanholders and of 14s. per spindle to the banks, both of which debts were larger than the share capital per spindle. Estimates of interest charges vary from ½d. to 3d. per pound of yarn. Since shareholders are often loanholders, any effort to call up capital results in calls on loans which cannot be met—truly a vicious cycle.

A further weakness in the financial structure is due to the grossly inflated capital values of the post-war boom. In 1920 when the world was replenishing itself with cotton cloth, 150 companies paid an average dividend of 40 per cent and it was argued that mills could not be replaced for three times their stated value. Mills were bought and sold in an orgy of faith in the Lancashire El Dorado with the result that to-day there is a vast disparity between the book values of reconstructed mills and their market values. An analysis of these recapitalized mills shows that whereas the paid up share capital of the original mills which were not reorganized averages 20s. 6d. per spindle, the reconstructed mills average £1 15s. per spindle (some even have as high as £4 and £5 per spindle); and whereas the loan capital of the original mills averages 10s. per spindle, the loan capital of the reconstructed mills averages 14s. 6d. per spindle.[13]

Beginning in 1926, the employers' associations have formulated plan after plan for self help, only to have each one defeated by these Man-

[12] *The Times Trade and Engineering Supplement,* January 28, 1928.
[13] *London Times,* September 19, 1927.

chester individualists. The Federation of Master Cotton Spinners presented the first scheme which included the adoption of basic prices, fixed according to the price of current month future plus points on for spot cotton and something added for producers' costs and restricted output with the hope of checking the disastrous weak selling. The unwillingness of the members to coöperate led to a decision to return the industry to unrestricted competition with the expectation that out of the Darwinian struggle to survive, full-time running with consequent lower costs would follow. The resulting chaotic condition led to the formation of the Cotton Yarn Association in the American section with the defined purpose of regulating production and raising prices. Minimum prices, described as sensational, were established to which the members loyally adhered in spite of the ruinous competition from 300 firms representing 25 per cent of the American spinners who did not join the Association.[14] An appeal to the Federation of Master Cotton Spinners for support failed, as only 72 per cent of its members agreed to accept the terms and another scheme was abandoned.

The next effort took the form of an appeal to the operatives and represented a joint effort of the Federation of Master Cotton Spinners and the Cotton Spinners and Manufacturers' Association, both of which sent similar reports on the state of trade of the cotton industry to Mr. J. Bell, the secretary of the United Textile Workers Association. In addition to proposing certain other fields in which a study of costs might yield results such as taxation,[15] social services, finishing costs and the Dyestuffs act, both reports included definite suggestions for a 25 per cent reduction of wage list rates which would reduce the current earnings 12½ per cent and an increase in the working week from 48 hours to 52½ by providing for the cleaning of machinery outside of 48 production hours. This latter would necessitate before breakfast working.

As might have been expected, the operatives were indignant. They felt that they had been "singled out for attack," since the wages and hours proposals were the only specific recommendations. They met the employers, however, in January, and brought to the meeting two propositions: that the government be petitioned to set up a Statutory Committee with full powers "to ascertain all the factors which go to make up

[14] T. M. Ainscough, *Report on the Conditions and Prospects of British Trade in India, 1926-27* (1927), Department of Overseas Trade, p. 58. Mr. Ainscough claims that the increased prices of the Cotton Yarn Association in India resulted in a considerable loss of trade to Japan.

[15] The proposed rate remission scheme in the new Churchill budget would relieve the industry of three-fourths of the burden of local rates, which would mean a saving of £1,350 a year for a mill of 100,000 spindles. It would equal about 1½d. per hundred yards. *Manchester Guardian Weekly*, April 27, 1928.

what the employers call the cost of production;" and that the wages and hours recommendations be withdrawn pending investigation. After two depressing meetings the employers withdrew them and presented a counter proposition that a joint committee of twenty-four be appointed "to sit continuously—if this proves feasible—and report within a month in what way production costs can be reduced so as to secure a greater volume of trade for the industry."[16] The unions at a later meeting waived their demand for a Statutory Committee and indicated their willingness to accept the plan for a joint committee of twelve, provided that it had an independent chairman and was assisted by competent accountants. The employers refused to accept this revision of terms and a few weeks later sent in a franker request for a conference "to consider the desire of the two employers' organizations to negotiate with you for a reduction in the wages of cotton operatives employed at the mills of the members of our organizations and to discuss proposals with the object of giving full productive effect to the 48-hour working week."[17] Meanwhile, the Labour Research Department at the request of the United Textile Factory Workers' Association issued a far-reaching report on the industry, emphasizing the need for a "financial purge" and reorganization, and accusing the employers of not facing the realities of the situation.[18]

On the whole it would seem as if the operatives were justified in their point of view, both with regard to the wages and hours propositions and the general attitude of the employers whose actions warrant the assumption that they do not dare to risk full exposure of their financial status. With regard to wages it has been estimated from costing figures of the Cotton Yarn Association on dhooties and standard printers that the proposed reduction would affect the total f.o.b. costs of dhooties by little more than 1 per cent and the costs of printers by two-thirds of 1 per cent, which would not be a great help in the recovery of world markets. On the question of hours, it is no wonder that the operatives feel that the employers are bewildered with plans shifting back and forth from short time working to demands for the 52½ hour week, which would make it impossible for Great Britain to ratify the Washington Convention. There is a possibility of securing the 48-hour production week, however, by altering the cleaning agreements to provide for a separate cleaning crew. As the London *Times* aptly pointed out, these are obvious economies which require "no painful effort of the reorganization or reformation of antiquated habits."

[16] *Manchester Guardian Weekly,* February 24, 1928.
[17] *Manchester Guardian Weekly,* April 6, 1928.
[18] *London Times,* February 10, 1928.

The growing scarcity of labor in the spinning trades in spite of the depression should be a warning to try other methods first.[19]

The most constructive plan has come from the Cotton Yarn Association in the proposed formation of a large combine of spinners of American cotton, which has been urged for the last two years by John Maynard Keynes. The main features as outlined by J. L. Tattersall, chairman of the association, are as follows:

A corporation, called the Lancashire Textile Corporation, to be formed, which will not only amalgamate companies, but also purchase works and businesses and carry them on.

Amalgamation to be effected by exchanging shares of the corporation for the existing shares or by acquiring debts and issuing debenture stock and shares in payment thereof.

The basis of exchange to be as follows: (a) Fixed assets at a valuation between replacement and liquidation values; (b) Stock on a joint valuation; (c) Uncalled capital on an agreed basis.

The corporation not to come into existence unless a minimum of 2,000,000 spindles is initially absorbed.

Ordinary trading creditors to be exempt from the scheme on the amounts owing on usual trading terms, and their accounts to be met as in normal trading. The corporation to issue 5½ per cent debentures to an amount equal to half the value placed upon the fixed assets and the stocks of cotton and yarn, and 6 per cent preference shares to be issued in certain cases.

All uncalled capital to be called up at the rate of 2s. per £1 share per annum, or within five years, so that the small investor may pay out of income, and one-half of the money received in calls to be paid to the creditors. Creditors to receive debentures, preference shares, ordinary and deferred shares, and cash, and share-holders to receive deferred shares for their present shares when fully paid.

The individual companies to be kept in existence, but not to trade except through the corporation.

A profit-sharing scheme for employees suggested as a future development.[20]

The first board of directors would consist of four directors of the Cotton Yarn Association, four directors of the companies taken into the amalgamation and four representatives of the debenture stockholders.

Though Mr. Tattersall and his associates do not feel that the combine would cure all the troubles of the trade, they believe that savings

[19] In Oldham, the largest spinning town in the world, there is a scarcity of 2,000 "little piecers" juvenile workers. *Times Trade and Engineering Supplement*, April 7, 1928.

[20] The *London Times*, March 28, 1928.

as high as £6,500 per annum for mills of 100,000 spindles would come of it such as: reduction in executive costs, bulk buying of cotton, central control of selling, simplification of products of single mills, establishment through cost accounting of the most suitable use of separate mills, central sales of waste and central purchasing of supplies, pooling of technical knowledge, reduction of interest charges and rationing of production when necessary by stopping individual mills rather than by expensive general short-time running. Perhaps the special appeal to Lancashire men lies in the fact that with proportionate sacrifices the scheme could be put through without calling for outside capital from London or America.

Undoubtedly the business of adjusting the claims of the various interests involved—directors, shareholders, loanholders, banks and other creditors—will be a difficult and delicate task, necessitating a separate negotiation with each mill; and there will be opposition from managers and salesmen. The bankers, on the other hand, have given advice and have expressed their willingness to coöperate. With liquidation as the only other alternative, the Lancashire industrialists are being forced to "rationalize" along the lines of the German cartels and to bring their industry into step with the general world movement toward mass production for which the unit of 100,000 spindles is too small.

Thus it can be seen that the cotton textile industry of England is facing serious problems. On the one hand, is the pressing situation in the American section which must be met immediately by some such plan as the proposed Lancashire Textile Corporation if financial disaster is to be averted. On the other hand, there is the far bigger problem of Great Britain's future place in the world export market, which she has considered as her birthright. A study of her advantages shows them due primarily to an early start and reveals the fact that as industrialization creeps around the world, other countries with natural advantages, large demands for cotton goods and a desire for industrial development are bound to challenge her position of dominance, almost monopoly. Schemes such as the early ones for price increases and restricted output will be futile with foreign competitors waiting eagerly on the boundary lines. The industrialists can, however, do much to help themselves by a careful reorganization from top to bottom.[21] Competition will be keener, exports markets will be smaller as home production grows in foreign lands; but Lancashire men, once aroused, should be able to retain a generous share of the world trade in cotton textiles.

Ethel Barbara Dietrich

Mount Holyoke College

[21] The Joint Committee of Cotton Trade Organizations in Manchester has set up committees of inquiry which are at work.

MEASURING THE ACCURACY OF PREDICTION

Do the studies of an economist enable him to predict certain results from certain situations? If so, he can fairly lay claim to the title of scientist. But a prediction is of very questionable value unless its degree of accuracy is known. How may the economist evaluate his predictions? How may he test their accuracy?

A number of statistical measures of accuracy are available. However, one of the most commonly used measures is often erroneously applied, or incorrectly interpreted. Economists who do not happen to be statisticians, and there are many such, should at least be able to interpret the measures of accuracy in everyday use with some degree of precision. This paper attempts a discussion in simple terms of the more common measures of accuracy, together with some comments on their limitations, and interpretation.

I

Suppose we assume a forecast of the price of commodity Z each week for 20 weeks. According to our prediction, price will be as follows: the first week, 5 cents; the second week, 20 cents; third week, 5 cents; fourth week, 20 cents; and so on. If we plot this forecast, we will have a curve like that marked x, Case I, in Chart I. At the end of 20 weeks we will have available the actual price data for the period. Suppose we find that price actually fluctuated in this manner: first week, 10 cents; second week, 11 cents; third week, 10 cents; and so on, throughout the entire period. Plotting these figures in Case I, we have the continuous line y, representing the actual price fluctuations for 20 weeks. It is evident that our forecast correctly indicated the *direction* of the price movements, but did not accurately indicate the *amount* of their fluctuations. Let us now apply various measures of accuracy to these predictions.

II

Suppose we consider the errors appearing in Case I. In the first week the forecast was 5 cents under and in the second week 9 cents over the actual price. These errors are repeated in successive weeks. If we add the errors for the whole period (140) and divide by the number of observations (20) we shall have the average error, or *average "deviation,"* as it is called.[1] When the actual price varied between

[1] $A.D. = \frac{\sum(y-x)}{N}$ .... (Formula 1)

Where $A.D.$ represents the average deviation.
x represents the predicted value in an observation.

10 cents and 11 cents, this forecast had an average deviation of 7 cents. Not a very good forecast, was it? Yet one of the most commonly used measures of accuracy, as ordinarily interpreted, indicates that this forecast was perfect! This measure will be discussed presently.

The average deviation has one outstanding disadvantage when used in this way. This measure of accuracy appears in units identical with those of the forecasted and actual series. Thus two forecasts expressed in dissimilar units are not directly comparable, nor can their average deviations be readily compared. If the deviation is expressed in terms of per cent, this difficulty is overcome, and it is possible to compare the accuracy of a forecast in dollars with one in pounds, or other units. Since the error with which we are concerned is due to a deviation of the forecasted from the actual price, we may divide each deviation by the actual price occurring in that observation. If these values are summated, divided by the number of observations, and multiplied by 100, we shall have a measure expressed in per cent. Thus the *average "deviation" in per cent,*[2] in Case I, is found to be 65.9.

It is often desirable to give special emphasis to the larger errors, since they may be of great significance when the forecast is actually applied in practice. Any measure of average deviation gives weight to these large errors in direct proportion to their size. If it is desirable to give special weight to large deviations, as is generally the case, the *standard error in per cent* may be used.[3] Having divided the error of an observation by the actual, or y, value of that observation, we square the result, summate these squared values, divide by the number of observations, extract the square root, and multiply by 100. Squaring gives greater weight to the large deviations. Thus we should expect the standard error in per cent to be somewhat larger than the average deviation in per cent. In fact, it is. Thus the standard error, in per cent, in Case I is 67.8 while the average deviation, in per cent, was found to be 65.9. Considering the wide variations of the forecast in Case I, the larger error would appear to be the more conservative statement of the situation.

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y represents the value that actually appeared in that observation.
N represents the number of observations.
$\sum$ Sigma—the sign of summation. (Plus and minus signs are here disregarded.)

[2] $A.D.$ (per cent) $= 100\dfrac{\sum\left(\frac{y-x}{y}\right)}{N}$ . . . . (Formula 2)

$S.E.$ (per cent) (or S_y per cent) $= 100\sqrt{\dfrac{\sum\left(\frac{y-x}{y}\right)^2}{N}}$ . . . . (Formula 3)

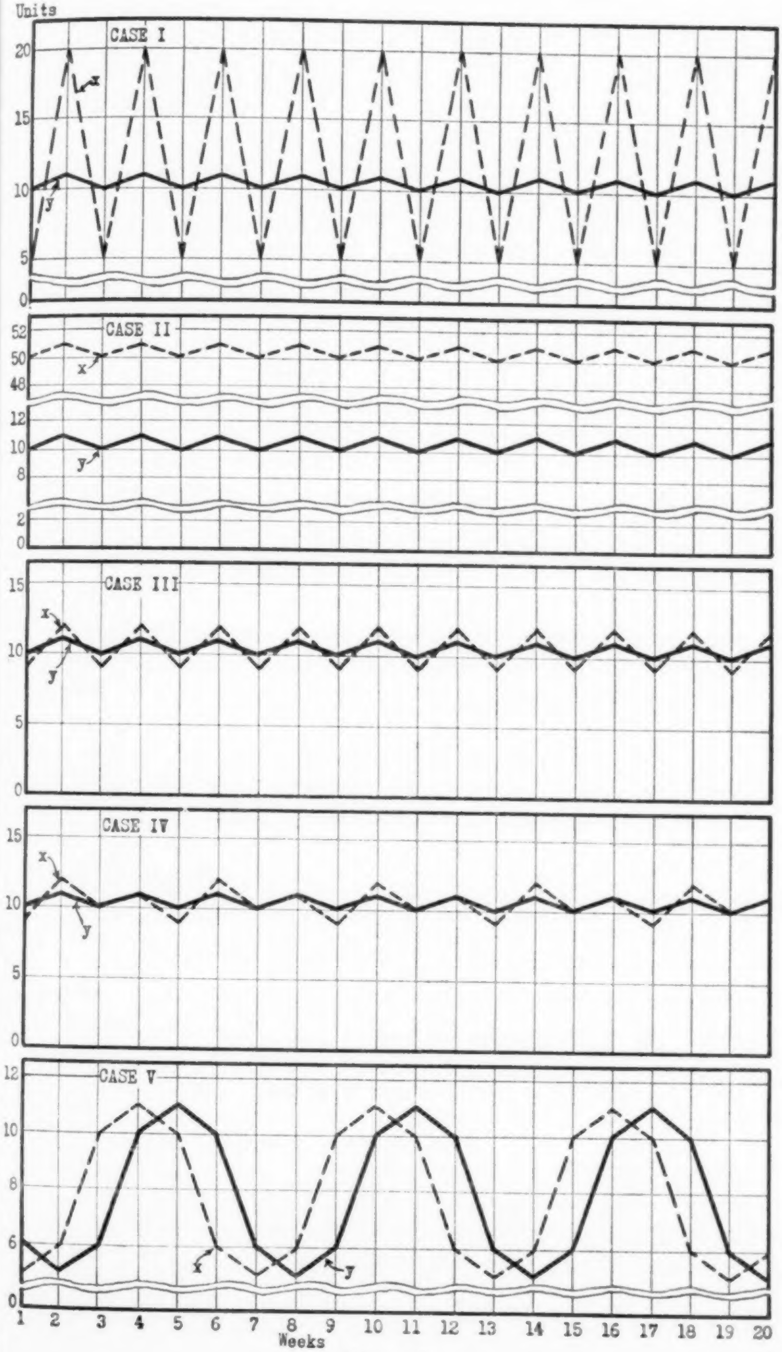


CHART I
FIVE ASSUMED FORECASTS

III

Another common measure is the so-called ***standard deviation***[4] "found by taking the square root of the average of the squares of the deviations from the arithmetic average . . . . The standard deviation is useful when it is desired to give special weight to the extreme deviations. Also it has certain mathematical characteristics which recommend its use from the theoretical point of view."[5]

Suppose we wish to compute the standard deviations of the two series in Case I. Let us begin with the forecasting series. Since x fluctuates between 5 cents and 20 cents, its average value during the 20 week period is 12.5. This is the *mean.* We now take the deviation of each observation from the mean, square each of the deviations, summate them, divide by the number of observations, and extract the square root. Thus the standard deviation of the x, or forecast, series is found to be 7.5 cents; while the standard deviation of the y, or actual, series is represented by .5 cents. Like averages, standard deviations of forecasts in different units, such as pounds, feet, dollars, etc., are not directly comparable. The standard deviation, however, plays a very important part in another measure of accuracy.

IV

The most commonly used, and misused, measure of the accuracy of prediction is the Pearsonian coefficient of correlation.[6] This measure is based upon the standard deviations of the two series to be compared. If the percentage change in the deviation from the mean of one series is the same as the percentage change in the deviation of the other series, correlation is said to be direct, and perfect. Under these conditions, $r = +1$. If the percentage change is equal but opposite, correlation is inverse and perfect, and $r = -1$. If there is no relation between the percentage changes of the deviations, there is no correlation, and $r = 0$. Other degrees of relationship are represented by values of r falling between 0 and ± 1.

[4] $S.D. \text{ (or } \sigma) = \sqrt{\frac{\sum d^2}{N}}$ . . . . (Formula 4)

Where $S.D.$ represents the standard deviation.
d represents the deviation of an individual observation from the mean (or arithmetic average) of all the observations.

[5] H. Jerome, *Statistical Method*, Harper, New York, 1924, p. 156.

[6] $r = \frac{\sum xy}{N\sigma_x\sigma_y}$ . . . . (Formula 5)

Where r represents the coefficient of correlation.
x represents an observation of the forecasting series.
y represents an observation of the forecasted or actual series.
N represents the number of pairs of observations.
σ_x represents the standard deviation of the x series.
σ_y represents the standard deviation of the y series.

Direct correlation means that when the value of y, an observation of the actual series, increases, the corresponding value of x also increases. Inverse correlation means that when the value of y increases, that of x decreases. It should be understood that the actual deviations themselves may be far from equal. It is the percentage, or relative, change which is important. Thus, in Case I, the standard deviation (S.D. for short) of the y series is .5 while the S.D. of the x series is 7.5. However, the percentage change in successive observations is the same for x as for y. Hence the coefficient of correlation for Case I

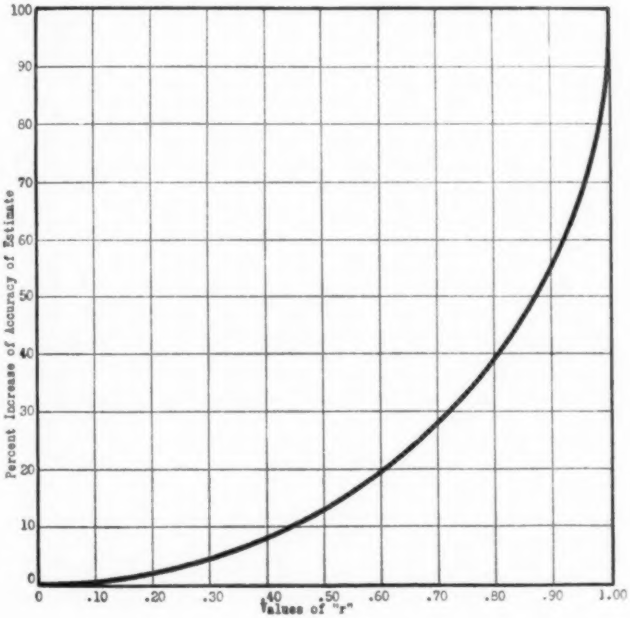


CHART II
PER CENT INCREASE OF ACCURACY OF ESTIMATE WITH RISING COEFFICIENT OF CORRELATION

is +1.000. According to the Pearsonian coefficient, then, the correlation of x and y is perfect, in this instance. Such a value of r does not mean that the predicted series is the same as the actual series, but that the percentage changes of these series are the same. This point will be further considered below.

A standard statistical text says of r that:

The coefficient of correlation is an abstract measure of the degree to which the average relationship actually holds in practice (p. 375).

The greater the value of r the greater the confidence that may be placed in the equation as an expression of a relation which is approximated in a high percentage of cases (p. 374).[7]

What, exactly, is the relation which is approximated when r has a value of, say, .6 or of .8? This relation may be obtained most readily by interpolation from such a curve as that in Chart II. Here we see that when r=.6, the standard error of the standard deviation of the forecasted series has been reduced by 20 per cent of the standard error when r=0. When r=.8, the standard error of the standard deviation of the actual series has been further reduced by an additional 20 per cent, or a total reduction of the standard error of 40 per cent. Thus additions to the value of r above .8, and particularly above .9, are seen to be much more significant than similar additions to lower values of the coefficient. It is a very simple matter to construct such a curve as that in Chart II, using any dimensions desired, in order to determine at a glance the per cent increase of accuracy of prediction of any value of r over any other value. Since the curve describes a perfect quarter circle, it is only necessary that the two axes be of the same length and that the circle be accurately drawn with a compass.[8]

[7] F. C. Mills, *Statistical Methods*, Holt, New York, 1925. *Cf.* also: R. E. Chaddock *Principles and Methods of Statistics*, Houghton Mifflin, Boston, Mass., 1925, p. 304; E. E Day, *Statistical Analysis*, Macmillan, New York, 1925, pp. 188, 193, 209; C. O. Hardy and G. V. Cox, *Forecasting Business Conditions*, Macmillan, New York, 1927, p. 24; R. A. Fisher. *Statistical Methods for Research Workers*, Oliver and Boyd, Edinburgh, 1925, pp. 171-172.

[8] The curve in Chart II was obtained by plotting values of r on the horizontal axis and values of $1-\sqrt{1-r^2}$ on the vertical axis. Required: To prove that the curve secured in this way is a segment of a circle.

$$1-\sqrt{1-r^2}=1-\frac{S_y}{\sigma_y}$$

And

$$1-\sqrt{1-r^2}=1-\sqrt{\frac{s_y^2}{\sigma_y^2}}$$

Cancelling the ones, and squaring:

$$1-r^2=\frac{S_y^2}{\sigma_y^2}$$

Then:

$$1-1+\frac{S_y^2}{\sigma_y^2}=\frac{S_y^2}{\sigma_y^2}$$

Thus $1-\frac{S_y}{\sigma_y}$ may be substituted for $1-\sqrt{1-r^2}$

The formula for a circle, C^2 being some constant, is:

$$x^2+y^2=C^2$$

Let $x=r$ and $y=1-\frac{S_y}{\sigma_y}$ (substituted for $1-\sqrt{1-r^2}$)

Then $$r^2+\left(1-\frac{S_y}{\sigma_y}\right)^2=C^2$$

Expanding: $$r^2+\left(1-2\frac{S_y}{\sigma_y}+\frac{S_y^2}{\sigma_y^2}\right)=C^2$$

Just what does r do? It measures the degree of relationship between the two variables of a series. However, a very high correlation, such as that between auto registrations in the United States and gin drinking in England, does not mean that either one causes the other. It is due to the fact that both series have an important common factor. That is, the element of *time* is common to both. This is almost always true in the case of economic predictions. In such a case, common causation may be conspicuous by its absence. Thus the interpretation of a high value of r as showing direct causation is fallacious. To say there is a common factor behind both auto registrations and gin drinking is quite different from saying that one causes the other. Hence correlation does not establish causation between the two items under consideration. This point requires careful watching, since there is much loose thinking in this connection.

The coefficient of correlation is commonly used to measure the accuracy of prediction of a forecast. As pointed out above, this does not mean that a coefficient of + 1 indicates perfect approximation, but merely that the forecast deviates from the actual series by a certain percentage. Much of the current fallacious reasoning concerning the accuracy of prediction turns upon this point. For that reason it will now be treated in greater detail. In addition to Case I already discussed, Chart I contains four other cases which here come up for consideration. Applying the Pearsonian formula to these five cases we obtain the coefficients shown in Table I.

TABLE I

Case	Coefficient of correlation r	Probable error (P. E.)[9]
I	+1.000	±.00
II	+1.000	±.00
III	+1.000	±.00
IV	+ .894	±.02
V	+ .516	±.08

An examination of Chart I shows three things. First, the forecast in Case I is a closer approximation to the actual series than the forecast

If any values of the two axes, r and $1-\sqrt{1-r^2}$, determined by interpolation from the curve in Chart II, are substituted in the above equation, $C^2=1$, a constant. Therefore this curve represents a segment of a circle.

[9] Probable error $(P.E.) = .6754 \dfrac{(1-r^2)}{\sqrt{N}}$ ....(Formula 6)

Where r represents the coefficient of correlation.
N represents the number of observations measured by the coefficient.
That is to say, if a different sample were taken, with the same number of pairs of observations, the probability is 1 to 1 that the new value of r would fall within the limits set by the previous value of r plus or minus the probable error.

in Case II. Second, Case IV shows a forecast superior to those in Cases I, II, or III. Third, in Case V the forecast more closely approximates the actual series than is true in Case II. On the other hand, an inspection of Table I would lead to the conclusion that Cases I, II, and III represented equally accurate forecasts. Many economists and some statisticians suppose that a perfect coefficient of correlation indicates that the forecasted series and the actual series are always identical. It is now evident that this supposition is erroneous. We may therefore attempt to find the reason for such a misapplication of the Pearsonian formula.

V

As a matter of fact, correlation was first applied to biological data, not to time series. It is the relationship, not the approximation, that is of importance here. Suppose we have two men, one with long arms, one with short. Does the long-armed man have long legs? This question can be answered by correlation. However, if we ask: "Is the greater length of leg in exact proportion to the greater length of arm?" correlation can give but a partial answer. The coefficient was designed to solve questions of the first type only. Francis Galton, writing in 1888, said:

> "Co-relation or correlation of structure" is a phrase much used in biology, and not least in that branch of it which refers to heredity, and the idea is even more frequently present than the phrase; but I am not aware of any previous attempt to define it clearly, to trace its mode of action in detail, or to show how to measure its degree.
>
> Two variable organs are said to be correlated when the variation of the one is accompanied on the average by more or less variation of the other, and in the same direction. Thus the length of the arm is said to be co-related with that of the leg, because a person with a long arm usually has a long leg, and conversely.[10]

Karl Pearson, to whom the formula in everyday use has been ascribed, sums up the history of correlation (1896) in these terms:

> The fundamental theorems of correlation were for the first time exhaustively discussed by Bravais nearly half a century ago. He deals completely with the correlation of two and three variables. . . . . Mr. Galton . . . . (40 years later) introduced an improved notation which may be summed up in the "Galton function" or coefficient of correlation. . . . . The investigation of correlation which will now be given does not profess, except at certain stated points, to reach novel results. It endeavors, however, to reach the necessary fundamental formulæ with a clear statement of *what assumptions are really made,* and with special reference to what seems legitimate in the case of heredity.[11]

[10] Francis Galton, "Co-relations and their Measurements, Chiefly from Anthropometric Data," *Proc. Royal Soc. of London*, vol. 45, Dec. 20, 1888, p. 135.

[11] Karl Pearson, "Mathematical Contributions to the Theory of Evolution—Regression, Heredity, and Panmixia," *Phil. Trans. Roy. Soc. of London*, Series A, vol. 187, 1896, p. 261.

Karl Pearson's definition of correlation is based upon that quoted from Francis Galton; it follows the latter quite closely, differing only in its greater precision of phraseology. The last clause of the above quotation, *i.e.*, "with special reference to what seems legitimate in the case of heredity," is quite significant. The degree of relationship is here of primary importance. For this reason, the coefficient of correlation was developed as a measure of relationship. Thus two series with equal variation, relative to their respective standard deviations, are said to be perfectly correlated.

It is for this reason that the coefficient is unsatisfactory as a measure of a forecast's accuracy. Relative variation is only one of several points that must be considered in determining the accuracy of prediction. Such important elements as closeness of fit, and absolute magnitude of variation, must also be taken into account. Therefore the Pearsonian coefficient can be used in this way only to a very limited extent; and we must search further for a satisfactory solution.

VI

Mr. H. S. Will has presented a method which partially solves the difficulty. [12] Instead of basing his formula on the standard deviation, as Pearson did, he starts from the standard error, explained above. [13] In discussing p, Mr. Will says, in part:

> The coefficient p we may define as *the precision with which a function of the form $y = f(x_1, x_2, \ldots . x_n)$ may, when fitted by the method of least squares, be employed to represent a series of observations.* . . . . We take pains to point out again that since the coefficient of correlation and the coefficient of precision are not the same in their signification, the one cannot be employed as a substitute for the other. The first is essentially a measure of the extent to which change in one variable is dependent on change in the other; while the second must be regarded as a measure of the extent to which the values of one variable are predictable from the values of the other.[14]

[12] H. S. Will, "A Measure of Stability with a Discussion of Certain of its Implications,' *Jour. Am. Stat. Assoc.*, vol. 22, new series, no. 158, June, 1927.

[13] $$p = \frac{1}{\sqrt{\left[S.E.^2\left(\frac{N}{\Sigma\left(\frac{y}{x}\right)^2}\right)1000\right]+1}} \quad \text{(Formula 7)}$$

Where p represents the coefficient of precision.
$S.E.$ represents the standard error (*not* in per cent, however).
N represents the number of pairs of observations.
x represents an observation of the forecasting series.
y represents an observation of the forecasted or actual series.
Values of p will fall between 0 and +1, according to the degree of precision.

[14] Will, *op. cit.*, pp. 190–191.

The last sentence tells the story. We find that p represents, and r does not represent, a measure of the precision of prediction of a forecast. Let us now apply this measure to our five assumed cases. Table II presents the results obtained by means of p, together with those secured by the use of r.

TABLE II

Case	Coefficient of correlation r	Coefficient of precision p
I	$1.000 \pm .00$	.0683
II	$1.000 \pm .00$	.0017
III	$1.000 \pm .00$	.3193
IV	$.894 \pm .02$	.3193
V	$.516 \pm .08$	.1054

We at once see that the relative value of the various forecasts, as determined by inspection, is strikingly borne out. The fourth case is an exception, however. Although this forecast is evidently the best prediction of the five, the coefficient of precision fails to evaluate this situation correctly. Case V is now seen to represent a prediction superior to those found in Cases I and II. This is in line with the results obtained above by means of inspection. We now have a mathematical measure of the accuracy of prediction. Is it, however, completely satisfactory?

VII

The answer to this question will depend upon the aim which we have in mind. Are we to consider an error of 1 in 10 as more or less significant than an error of 10 in 100? *Relatively*, the error is the same in each case, *i.e.*, 10 per cent. *Absolutely*, however, the error in the second example is 10 times as great as that in the first. If we desire a measure of the accuracy of prediction in *relative* terms, p will do quite well. On the other hand, if we are seeking a measure of the accuracy in *absolute* terms, p is far from satisfactory. It was not designed to fulfill the latter purpose.

It is a commonplace of business that a small profit on a large number of units is often to be preferred to a large profit on a small number of units. Large quantities are commonly handled upon much smaller profit margins than are small quantities. Therefore it is obvious that for many purposes of forecasting, the *absolute* error is of prime importance to business man and economist alike. In such cases, the use of p as a measure of the accuracy of a prediction might lead to seriously fallacious conclusions.

The difficulty may be solved by means of a formula somewhat similar to that proposed by Mr. Will. It is also based upon the standard error, and is a measure of the absolute closeness of fit of the predicted

series to the actual series. We may therefore say that *A represents a coefficient of approximation.*[15] To show that A will measure the absolute, rather than the relative, accuracy of a forecast, let us test it in several modifications of Case III.

In Case III x fluctuates between values of 9 and 12; y between values of 10 and 11. Suppose we multiply all these values of Case III by 10, by 100, and by 1,000. Does this alter the relative accuracy of the

TABLE III

Values of Case III multiplied by:	x fluctuates between:		y fluctuates between:		Average deviation	P	A
1	9 and	12	10 and	11	1	.3193	.9955
10	90 and	120	100 and	110	10	.3193	.7228
100	900 and	1,200	1,000 and	1,100	100	.3193	.1046
1,000	9,000 and	12,000	10,000 and	11,000	1,000	.3193	.0516

prediction at all? No, for both series have been increased in like degree. Perhaps this point will be more readily seen if it is presented in tabular form. In Table III the *relative* errors of each of the examples are the same. That is, an error of 1 with a y of 10 is relatively the same as an error of 1,000 with a y of 10,000. However, the *absolute* error of the last example is 1,000 times as great as that of the first. The coefficients of precision, therefore, remain constant since p measures the relative accuracy of prediction. On the other hand, the values of A fall sharply, since the coefficient of approximation reflects the rapidly increasing absolute errors of the successive examples.

TABLE IV

Case	r	$P.E.$	P	A	A.D. per cent	S.E. per cent
I	1.000	±.00	.0683	.5395	65.90	67.79
II	1.000	±.00	.0017	.0065	381.80	382.23
III	1.000	±.00	.3193	.9955	9.55	9.56
IV	.894	±.02	.3193	.9989	4.78	6.76
V	.516	±.08	.1054	.7934	26.21	32.72

[15] $$A = \frac{1}{\sqrt{\left[S.E.^2\left(\frac{\Sigma\left(\frac{y-x}{y}\right)^2}{N}\right)\right]+1}} \qquad \text{(Formula 8)}$$

Where A represents the coefficient of absolute approximation.
$S.E.$ represents the standard error.
N represents the number of pairs of observations.
x represents an observation of the forecasting series.
y represents an observation of the forecasted or actual series.

Here x is subtracted from y, rather than divided into y, in order to take account of absolute, instead of relative, errors. This factor is inverted from Mr. Will's formula so that a large error divided by N will give a smaller value of A than will a small error divided by the same N. The values of A are, in most cases, sufficiently large to render unnecessary the multiplication of this factor by 1000.

When the measure of approximation is applied to the five cases discussed above, we secure the results shown in Table IV. Any question as to which of the five cases represents the most accurate prediction of y by x is now dispelled. The measure of precision and the measure of approximation agree fairly closely throughout. The unreliability of the Pearsonian coefficient of correlation when used in this way is now quite evident.

VIII

In summing up this discussion, we may say that the average deviation and the standard error are useful primarily as rough measures only. If accurate measurement is required, one of the coefficients should be employed. When the *relation between two series* is to be determined, as in the case of testing a forecast for lead or lag, the Pearsonian coefficient of correlation may be used. If *relative errors* are of primary importance in determining the comparative accuracy of various predictions, Will's measure of precision is quite satisfactory. However, where absolute errors are to be kept as small as possible, irrespective of the size of the actual data in use, particularly if the data show a very marked trend, the absolute measure of approximation, A, should be employed.

In conclusion it would seem quite evident that the Pearsonian coefficient should be applied only to that type of calculation for which it was expressly designed, rather than as a test of the accuracy of prediction, for which purpose it is very unreliable. That it has been thus misapplied during a number of years, by statisticians as well as by economists, would seem to indicate a lack of familiarity, on the part of many persons, with some of the most basic elements in the history of this field.

R. Henry Rowntree

Ohio State University

A CRITICISM OF "ECONOMICS OF BUSINESS FLUCTUATION IN THE UNITED STATES, 1919-1925"[1]

It is clear in surveying present day economic literature that the whole tendency is toward quantitative measurements of economic phenomena. The discouraging instability of the older economics is being displaced by a stability premised on quantitative demonstrations. Metaphysics is giving way to measurements. This transition is definitely enlarging the field of economic inquiry, since there are at any time relatively few philosophers but many technicians (assuming a period of fairly widespread technical training). Consequently, we are not surprised at the present great volume of economic analysis; nor is it regarded as anything but a healthy indication.

However, there are certain words of caution to be spoken. For example, it is often feared that the economist, in adopting the rigorous methods of the worker in the natural sciences, has failed to adopt his scepticism and his wariness in drawing conclusions. This makes it incumbent on discriminating readers to be on constant guard. Faultless technique is no assurance of sound judgment in drawing conclusions. Statistical technique is no substitute for economic reasoning but merely provides tools of keener edge.

The most significant part of economic analysis is the determination and measurement of relationships. It is frequently stated that we know less about our economic environment than any other phase of our life. It is true that we become most heated in our discussions of economic problems; and the amount of heat developed is usually in inverse proportion to the amount of knowledge developed. To understand our environment we must understand relationships; and such understanding must proceed from quantitative measurements. The most widely accepted method of measuring economic relationships is the method of correlation.

Professor Bowley long ago defined the concept of correlation in saying that: "When two quantities are so related that the fluctuations in one are in sympathy with the fluctuations of the other, so that an increase or decrease of one is found in connection with an increase or decrease (or inversely) of the other, and the greater the magnitude of the changes in the one, the greater the magnitude of the changes in the other, the quantities are said to be correlated." This concept is fairly simple and easy to grasp in the realm of economics. Perhaps the very simplicity of the concept has been the cause

[1] By Montgomery D. Anderson, American Economic Review, volume XVII, number 2, pp. 230-271.

of much confusion in economic analysis. The notion of sympathetic fluctuations is apt to derive its examples largely from the field of the physical sciences in which causal relationships are apparent. Hence, the existence of a fairly high degree of correlation between economic measures is often taken as proof of a causal relationship. In a similar manner, a lagging time relationship is adduced as sufficient proof as to which of the measures is the causal factor.

This constant danger in economic analysis can be illustrated by reference to the article in the AMERICAN ECONOMIC REVIEW referred to above. The article bears all the earmarks of scholarship. The seven page array of correlation coefficients is especially impressive. One cannot escape the temptation to count them. They total 377! However, in justice, it must be added that a second examination reveals 180 duplications, leaving a net total of 197. Lest this relatively smaller number be regarded as lacking in impressiveness it is suggested that the doubter compute one coefficient showing the correlation between two series consisting of 84 items, the items first to be reduced to units of standard deviations. Such an array of correlation coefficients can only lead one to conclude that the author's purpose was to offer a final and conclusive quantitative demonstration of the economics of the business cycle from 1919 through 1925. Measurements are certainly not lacking. Whether this study has settled any of the troublesome economic problems involved in the series studied will be considered shortly.

Conclusions to be drawn on the basis of correlation coefficients under the most favorable circumstances necessitate much caution; generalizations based on coefficients of low value are likely to be quite without significance. The significance of correlation results can be gauged by the percentage reduction of the standard deviation which accompanies a given coefficient. [2] This concept can be explained to the non-technical reader by stating that the degree of correlation between two series is measured by comparing the reliability of estimates of the first series made on the basis of the second series with the reliability of estimates of the first series made on the basis of the mean of that series. In the former case the measure of error is the standard error, which is merely a type of average of the "misses" or errors made by estimating on the basis of the line of average relationship as developed in the correlation study; the measure of error involved in estimating on the

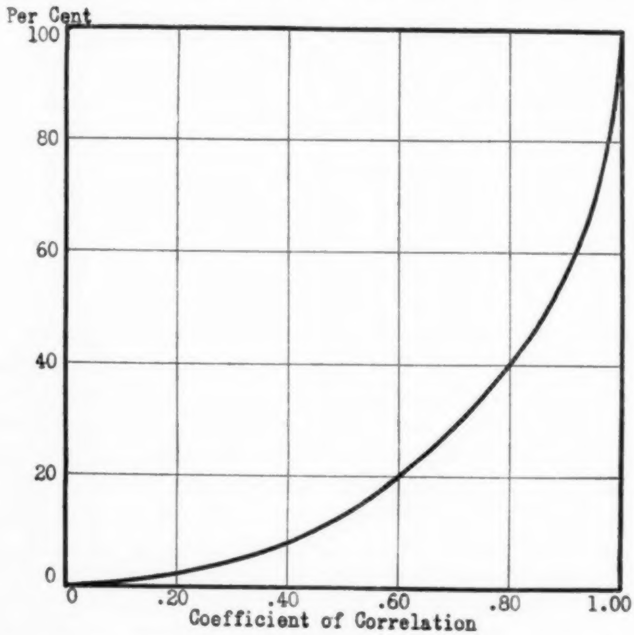
[2] There is, of course, the question of the adequacy of the sample on which the correlation measure is based, a question which need not be considered here. What we are concerned with here is the reliability of estimates based on the mathematical relationship between two series of numbers, the abstract measure of this relationship being the coefficient of correlation.

basis of the mean of a series as the most probable value is clearly some type of average of the deviations of the values in that series from the mean. The standard deviation is the type of average used. Unless the standard error is smaller than the standard deviation, the correlation analysis has not improved on our estimates based on the mean of the series itself; the degree to which it is smaller indicates the degree of significance to be attached to the correlation results. The normal relationship between the two measures of error is given in the following equation:

$$S_y = \sigma_y \sqrt{1-r^2}$$

Thus the standard error (S_y) is equal to a portion of the standard deviation (σ_y). In the case of perfect correlation (*i.e.*, when $r=1$) the standard error is equal to zero times the standard deviation or zero; as the correlation coefficient decreases in size, the standard error becomes an increasing percentage of the standard deviation. It is more

THE PERCENTAGE REDUCTION OF THE STANDARD DEVIATION ACCOMPANYING GIVEN COEFFICIENTS OF CORRELATION



convenient to express this in a complementary manner; *i.e.*, as the correlation coefficient increases in size, the *percentage reduction* of the standard deviation increases. This is shown in the chart above.

A glance at the chart shows that an increase in the correlation coefficient results not only in an increase in the percentage reduction of the standard deviation, but also results in a greater rate of increase.[3] This is highly significant. It will be noted that a correlation coefficient of .8660 is required to effect a 50 per cent reduction in the standard deviation. The question may fairly be asked whether the economist is justified in attaching any peculiar significance in gross correlation to a coefficient which accomplishes less than 50 per cent reduction in the standard deviation. It would certainly seem that nothing less than a 40 per cent reduction, accompanying a coefficient of .80, should be accepted as the basis of generalizations in economics. This is, of course, an arbitrary line of division; but the prevalent use of low coefficients of gross correlation suggests the need for higher standards. The chart invites higher standards, showing as it does the much better results which accompany the higher coefficients.

In connection with this discussion, it is interesting to tabulate the 377 coefficients listed in the article under discussion.

Size of r	Number listed
.00-.09	30
.10-.19	30
.20-.29	66
.30-.39	42
.40-.49	57
.50-.59	60
.60-.69	40
.70-.79	33
.80-.89	6
.90-.99	13
	377

It is significant to note that over 75 per cent of the tabulated coefficients accomplish a percentage reduction of the standard deviation of 20 or less. Only 19 of the lot are above .80. Attention has already been called to the duplications. Of the 13 coefficients above .90, 6 are duplications; of the remaining 7, it is found that 4 represent the correlation of the Federal Reserve rediscount rate with the market

[3] The complements of these percentage reductions may be secured readily by reference to a table of sines and cosines. The logic of this can be seen by comparing the previous formula ($S_y = \sigma_y\sqrt{1-r^2}$) with a common trigonometric formula: $\sin x = \sqrt{1-\cos^2 x}$. Thus the former equation can be written:

$$S_y = \sigma_y \text{ (sine of an angle whose cosine} = r)$$

The complement of the sine opposite the cosine which is equal to r will give the percentage reduction of the standard deviation. This relationship was pointed out by Holbrook Working, Quart. Pub. of Am. Stat. Assoc., vol. XVI, 1921, p. 765.

rate of interest, which is analogous to correlating the wholesale and retail prices of the same commodity. This leaves three genuine coefficients above .90. A similar examination of the 6 coefficients between .80 and .89 shows 3 duplications and 1 "wholesale-retail" correlation, leaving 2 genuine coefficients. Thus this array of 197 correlation coefficients reveals only 5 which accomplish a reduction of 40 per cent or more in the standard deviation. This alone suggests grave suspicions as to the significance of this study. But there are other objections, as will be seen.

The first paragraph of the article under discussion encourages one into believing that a quantitative analysis of the Foster and Catchings thesis is to be attempted. This, however, is sidetracked and an analysis of agricultural purchasing power and factory employee purchasing power in relation to the volume of manufactures is offered instead. This calls for another word of caution. The correlation of two sets of ratios or of one set of ratios with another set of actual numbers demands careful analysis, since spurious results may be secured. It is never clear from a curve of ratios whether the fluctuations are caused by the numerator or the denominator of the ratios. The nature of the relation between the numerators of the ratios and the actual numbers of the second series may be entirely obscured. This can be illustrated by the following examples:

Series	Items
Series A	1. - 2. - 4. - 2. - 1.
Series B	2. - 4. - 8. - 4. - 2.
Series C	4. - 8. -16. - 8. - 4.
Ratio B/C	.5- .5- .5- .5- .5

Thus it is seen that the perfect direct correlation between Series A and Series B is destroyed by dividing Series B by Series C. From an examination of curves representing Series A and Ratio B/C, one would conclude that they were quite unrelated; the underlying relationship would be entirely obscured. Another example may be cited:

Series	Items
Series D	1. - 2. - 3. - 2. - 1.
Series E	3. - 2. - 1. - 2. - 3.
Series F	10. - 5. - 1. - 5. -10.
Ratio E/F	.3- .4- 1. - .4- .3

In this case the perfect inverse correlation between Series D and Series E is obscured by correlating Series D with Ratio E/F, in which latter case the correlation becomes direct but not perfect. These examples, to be sure, are extreme ones but they serve to call attention to

the dangers inherent in correlation analysis when ratios are used as one series. The obvious safeguard is to present both the numerator and the denominator series in comparison with the series which is to be correlated with the set of ratios. In this way, the movements of the ratio curve can be interpreted intelligently. Charts I and III in the article under discussion sin in this respect. From a logical standpoint, the author may be entirely justified in using for his purposes Factory

Employee Purchasing Power $\frac{\text{(Factory payrolls)}}{\text{(Cost of living)}}$; however, the reader

never knows from the chart whether the change in the numerator or the denominator caused the change in the ratio curve. The same thing may be said of his use of Agricultural Purchasing Power

$\frac{\text{(Agricultural movement} \times \text{farm prices)}}{\text{(Non-agricultural prices)}}$; and it is quite conceivable

that a change in either the numerator or the denominator may be unrelated to the change in the series with which the ratio is being compared. Hence, the movement in the ratio curve may obscure any underlying relationship between the given series and the other factor in the ratio.

One of the most common errors in statistical analysis is to assume that the existence of a high degree of correlation between economic series proves a causal relationship between the series and that the series which turns up or down first is the causal factor and the lagging series is the effect. There is no more erroneous nor more dangerous notion in economic analysis. It is evident that the iteration and reiteration of the falsity of this notion has not yet accomplished its purpose. The recent statement of Messrs. Bullock, Crum, and Persons[4] is worth repeating:

> The computing of coefficients of correlation between any two series does not give us any more evidence of causation than the plotting of two curves on the same chart, and the plotting of two curves together on a chart carries no presumption whatever as to causation. . . . . Similar movements of two series . . . . may merely reflect a joint cause or a number of common causes.

The article under discussion contains instance after instance of this confusing error of assuming a causal relationship because of what is taken to be high correlation. A few citations will suffice (the italics are mine):

[4] *Review of Economic Statistics*, vol. IX, no. 2, pp. 89-90.

. . . . the coefficient (.71) . . . . indicates a strong tendency for purchasing power to be *governed* eventually by changes in the volume of goods produced for consumption . . . ., p. 232.

. . . . the presumptive evidence of *control* is some sort of sympathetic variation, p. 232.

Whether consumer demand is *restricted* by the tardy response of factory employee purchasing power . . . . may be probed by correlation . . . ., p. 233.

Since . . . . sales to rural consumers thus tend to follow changes in agricultural purchasing power, it may reasonably be concluded that the latter exercises a *controlling* influence upon the former, p. 233.

Correlation of agricultural purchasing power with manufacture of consumption goods indicates that the former has a tendency to *govern* the latter, p. 238.

Stocks, being antecedent, may be regarded as the *controlling,* or *causative* factor, p. 243.

Many other examples could be given; they are hardly necessary. Entirely aside from the fallacy of imputing causality to an economic series by virtue of correlation results, there is the further criticism of the author's use of *gross* correlation for the purpose of establishing *controlling, restricting,* or *causative* relationships. It would be a rare case in economics in which causation could be imputed to a single series. The relationships are much more likely to be multiple in character.

Attention should be directed to the questionable forecast of the volume of manufactures shown in Chart VI on page 255 of the article under discussion. The curve of the market rate of interest has been inverted and shoved forward 12 months, showing a 12 months' forecast of the volume of manufactures with a correlation coefficient of –.87. When the forecaster curve is changed to its proper position, it is observed that the turning points of the *forecasted* curve (volume of manufactures) occur uniformly *earlier* than the turning points of the *forecaster* curve by from 4 to 14 months. It is recognized that such a case presents a dilemma to the statistician.[5] Neither correlation coefficients nor the charting of two series in such a case will determine whether a given series leads a second series with direct correlation or whether the second leads the first with inverse correlation. Such a case demands logical analysis of the economic factors concerned. To show a forecast in such a case without acknowledging the dilemma is certainly misleading. The present instance is a fine example of the confusion in economic relationships which results from the manipulation of curves without adequate explanation. The author doubtless realized

[5] *Cf.* the chart on page 679 in the *Annalist* for May 13, 1927.

this confusion, and, despite the fact that the whole article represents an analysis based on correlation coefficients and the further fact that this particular coefficient (—.87) shows better correlation than 364 of the 377 coefficients listed, he discarded the 12 months' forecast (p. 256) for an interest theory which appeared more reasonable. Without at all quarrelling with his reasoning, one can still criticize the author's failure to state his reasons, thus leaving his reader in a state of confusion. This is particularly true when the author's own test of causality is precedence of movement (*cf.* the quotations cited above).

The uncritical reliance on correlation coefficients as guides to economic reasoning is apt to lead one into generalizations or statements which are clearly unsound. One or two examples from the present article may be cited.

Quoting a maximum correlation coefficient of +.27, the author states: "There is thus no statistical evidence of the controlling or restraining effect of factory employee purchasing power upon sales to consumers (department store sales) in manufacturing areas" (p. 233). This will be extremely difficult for the untutored to digest. Department store executives in industrial regions have apparently fallen into the error of believing that larger payrolls mean a larger volume of sales.

Discussing the industrial classes, the author states: "What is not saved in bank is spent, except a relatively negligible amount that is hoarded" (p. 235); and discussing the investment of money in business enterprises by industrial workers, he states that this "should be designated *productive spending,* not saving" (p. 235). These and other passages indicate a peculiar concept of "bank savings." One wonders just what happens to "saved goods" if they are not consumed. Hoardings are recognized as negligible and the carry-over of consumption goods is certainly for very short periods and relatively small in amount. It is clear that consumption goods must be consumed fairly quickly or be lost through waste. But what of diversions of effort to the creation of production goods? The answer is that in our modern economic flow, a sizeable increase in production goods cannot be brought about without at the same time effecting an increase in consumption goods. Additional machines and additional plants cannot be produced without giving employment to additional men, which men will require more consumption goods. Nothing seems clearer than that under a money economy the saving process is merely a shifting of command over present goods from one individual to another. In short, the saving process is an accounting procedure between individuals in a society which must as a whole consume or waste what it produces. So-called savings must take the form of capital goods or goods whose consumption will continue over a period of years. It is in this manner that

changes in society's balance sheet are brought about. Society thus does not have *more* because it has consumed *less;* rather, society has *more* because it has produced *more,* and producing *more,* has consumed *more.* Any concept of saving which in effect subtracts "saved goods" from the current economy is merely a concept of hoarding.

In conclusion, it should be stated in fairness to Mr. Anderson that his article shows much careful analysis. The present criticism concerns what is considered to be uncritical use of statistical technique.

Ralph J. Watkins

The University of Texas

REVIEWS AND NEW BOOKS

General Works, Theory and Its History

An Economist's Protest. By Edwin Cannan. (London: P. S. King. New York: Adelphi Co. 1927. Pp. xx, 438. 16s.)

When a veteran economist, long known as a pungent writer and an inspiring teacher, publishes a work under such a title as this, those who are growing restless under the inadequacies of the orthodox theories hasten to buy and to read in hope that there has at last come a leader to broader understandings who will speak with authority based upon recognized preëminence in the mastery of the passing doctrines. Professor Cannan's book will disappoint many purchasers of this type, while others who would enjoy it and profit will probably never examine it; for the title gives an incorrect impression as to its probable contents.

The book is a collection of eighty-five short articles, extracts from letters to friends, memoranda of conferences, book reviews, and lecture notes, written by Professor Cannan during the years 1914 to 1926 inclusive. Through these eighty-five items runs the protest, not of the speculative economist seeking broader laws to cover the complex new phenomena of the period, but of the orthodox economist waging battle against the wartime and post-war adjustments which were not in accord with *a priori* theories of English orthodox political economists.

The articles are forcefully written, their pungency frequently giving evidence of the emotional stress of the period in which they were produced. The order of arrangement is strictly chronological while the items are on a wide variety of subjects, so that there is no connecting thread except the note of protest and the reader's expectation (only twice erroneous!) that the conclusion to be reached in the next article will be strictly in accord with the older orthodoxy. The first of the two surprises is probably the high spot of the whole book, a memorandum written in 1918, "Should national debts be enforced?" The other is a book-review in 1922 which is entitled "Cost, rent, waiting, supply and demand," in which sympathy is expressed for the opportunity cost doctrine of Davenport, an attack upon orthodox rent theory is suggested, and "waiting" as the function of capital is roundly ridiculed.

The collection is most valuable as a record of the shifts and changes of popular and professorial attitudes toward price changes. The author struggled earnestly, through very simply written articles, to differentiate between "the rise in the price of particular things which happened to be in abnormally short supply," which he thought eminently desirable even under war conditions, and did not want checked by any governmental regulations; and "the general rise of prices which is synonymous with decline in the purchasing power of money." Here he

desired close governmental restraints. One reads between the lines that he felt this effort was not satisfactorily successful. The fundamental distinction clearest to the economist may be hardest for even a highly intelligent lay public to grasp in advance of practical experience; and Professor Cannan sought to make clear the distinction in order to contend effectively for two abstract principles each diametrically opposed to basic institutional tendencies sharply accentuated by the then prevailing conditions. An institutional economist scenting the same dangers might have approached the problem differently.

The most important series in the book is a running protest against inflation extending from 1917 through 1925, in a series of crisp, pungently written articles which are always interesting and sometimes inspiring. In 1924 and 1925 we find a return of complacency as England reapproaches and then restores the gold standard. This is treated as a *return to normal*, as though the preceding inflation were abnormal. Here we find the peculiar point of view of an established orthodoxy most evident. When will economists awake to the truth that inflation is normal to the particular institutional conditions which invariably and inevitably bring it forth?

This book shows a failure to recognize the extent to which economics, as a social science dealing with groups which are tremendously influenced by the institutions under which they find themselves, is a social-psychological study in which clear recognition of the institutional setting of the moment is primely essential to adequate understanding of the immediately apparent phenomena. This is the reason for the note of unhappy protest against the "evil activity of the enormous and ever-growing government offices set up to control this, that, and the other—usually to prevent people from doing something which it is perfectly desirable that they should do."

But with the passing of the war, and the return of the institutional setting to which he was habituated, we find Professor Cannan most nearly his true self in "The determination of the rate of interest," "Adam Smith on twentieth century finance," "Professors and protection," "Good money drives out bad in the long run," and "Recent improvements in monetary theory."

The work ends happily with "Adam Smith as economist: the gospel of mutual service." Concerning this Professor Cannan writes that it "may be regarded as my valediction to the London School of Economics and a restatement of my belief in the gospel of mutual service not only as between persons inside each country, but also between the people of every country and every colour."

John H. Sherman

Lake Forest College

NEW BOOKS

Barone, E. *Grundzüge der theoretischen Nationalökonomie.* (Bonn: Kurt Schroeder. 1927. Pp. 275. M. 6.50.)

Enrico Barone, together with Maffeo Pantaleoni and Vifredo Pareto, undoubtedly ranks among the three foremost Italian economists; and still his work is not as widely known as is the work of the others. This comes partly from his habit of publishing his articles generally in the *Giornale degli Economisti* and partly because until now none of his writings have been translated. The fact that the Italian language is not sufficiently known among most economists of the various countries is a great injustice in regard to Italian economics; for there are few other countries where the interest in economic theory is as vivid and where such excellent work is done as is the case with Italy. Therefore, since German books are read in greater number in American universities, this translation of Barone proves of special importance.

Aside from this, the volume possesses a much wider interest. It is not the chief contribution which Barone has made to economic theory; this lies in the papers published in the *Giornale degli Economisti*, which deal, mainly in mathematical form, with some of the most intricate problems such as the rôle and conception of consumers' rent, the theory of production, etc. This book, on the contrary, is a textbook, a summary of his lectures delivered at Rome, dating back as far as 1908. It is, however, not an easy textbook for a beginner; but it is an excellent basis for a serious discussion group that intends to go, step by step, through the main principles of economic theory. These are expanded in a positive, clear manner and in rigorous form. A number of graphs (66) serve as useful illustrations. The book embraces the whole of economic theory from the theory of wants and the concept of the economic equilibrium to the theory of cycles.

If this were the place to deal extensively with the doctrines expanded in this book, such examination would reveal the true value of Barone's important treatise. One feels vividly the need of going into a detailed analysis of every single paragraph, which, however, if one could, would mean no less than to rewrite the book in another form. But every systematic exposition of a doctrine immediately calls for such transformation, especially if in some separate fields (monetary theory, value theory) progress has been made that could not be incorporated in the present exposition.

The translation is well done, and Professor Schumpeter has written a short and illuminating introduction which justly characterizes Barone's significance for economic theory.

Oskar Morgenstern

Bilgram, H. *The remedy for overproduction and unemployment.* (New York: Vanguard Press. 1928. Pp. v, 113. 50c.)

Bousquet, G. H. *Vilfredo Pareto: sa vie et son œuvre.* (Paris: Payot. 1928. Pp. 230. 20 fr.)

Bye, R. T. and Hewett, W. W. *Applied economics: the application of economic principles to the problems of economic life.* (New York: Knopf. 1928. Pp. vi, 655.)

This "attempt to apply the principles of economics to the problems of economic life" is designed to follow a course in principles of economics, the authors apparently holding the belief that in the teaching of economics theory should precede application. The customary division into consumption, production, exchange and distribution is followed, although the material presented and the manner of presentation are in many respects original.

The point of view is frankly pragmatic throughout, as may be seen from such headings as "The promotion of efficiency in production," and "The promotion of efficiency in the organization of exchange." The charge justly made against many texts in economics, that in explaining the present economic system they almost certainly seem to justify it, and so reinforce the natural stolid conservatism of our students, cannot be urged against *Applied Economics;* for it points out everywhere the defects in the present system and possible ways of correcting such defects. Although in no respect radical or injudicious, the authors show a generous appreciation of the radical program, and a thoroughly progressive attitude. The section dealing with the Bolshevik régime is one of the best brief accounts to be found anywhere.

The authors' use of the word "liberalism," however, seems likely to lead to some misunderstanding. They define liberalism as "that system of industrial organization in which free enterprise and competition prevail," thus giving it a meaning closely allied to "classicism" or even "conservatism" in ordinary usage. This seems to be correct historically and etymologically; but since it is not current usage it will lead to much misunderstanding. When the authors speak of Professor Carver as a "staunch contemporary liberalist" they are perfectly correct; but a great many readers will wonder what has happened to Professor Carver.

Aside from the point of view, one of the chief merits of this book is the large amount of pertinent and interesting up-to-the-minute illustrative material. The authors modestly disclaim any attempt to elucidate economic theory; but it is the guess of the reviewer that students who master this book will know more theory that they can really use afterward, than many who have soaked themselves in all the confusing lore of margins and marginality.

It is impossible, in the space available for this review, to discuss or mention even a fair share of the interesting and stimulating chapters and passages in this book; but the reviewer cannot help pointing out the discussion of inequality as perhaps the best treatment of this subject that has appeared anywhere. Altogether this volume appears to be one of the very best texts available for the use of college freshmen and sophomores. The authors suggest a preceding course in principles; but to the reviewer it would seem more logical to take up principles or theory concurrently or later. It is certain that students who have first been through this book will get a far better grasp of theory than those who have had no such previous training.

John Ise

Cole, G. D. H. *The economic system: an elementary outline.* Workers' Assoc. outlines. (New York: Longmans Green. 1927. Pp. 90. 75c.)

Fairchild, F. R. and Compton, R. T. *Economic problems: a book of selected readings.* (New York: Macmillan. 1928. Pp. xi, 610.)

Gelesnoff, W. *Grundzüge der Volkswirtschaftslehre.* (Leipzig: Teubner. 1928. Pp. xii, 561.)

Hayes, H. G. *Our economic system.* (New York: Holt. 1928. Pp. xv, 545.)

Mayer, H., Fetter, F. A., and Reisch, R., editors. *Die Wirtschaftstheorie der Gegenwart.* Band I, *Gesamtbild der Forschung in den einzelnen Ländern.* Band II, *Wert, Preis, Produktion, Geld und Kredit.* Band III, *Einkommensbildung.* Band IV, *Konjunkturen und Krisen, internationaler Verkehr, Hauptprobleme der Finanzwissenschaft, ökonomische Theorie des Sozialismus.* (Vienna: Julius Springer.)

Meusel, A. *List und Marx: eine vergleichende Betrachtung.* (Jena: Fischer. 1928. Pp. vii, 118. Rmk. 5.)

Morgenstern, O. *Wirtschaftsprognose: eine Untersuchung ihrer Voraussetzungen und Möglichkeiten.* (Vienna: Julius Springer. 1928. Pp. v, 129. Rmk. 7.20.)

Schröder, P. *Der Einfluss der gegenwärtigen Wirtschaftsordnung auf die Einkommen- und Besitzverteilung.* Heft 1. (Jena: Fischer. 1928. Pp. v, 217. Rmk. 11.)

Senior, N. W *Industrial efficiency and social economy.* Vols. I and II. (New York: Holt. 1928. Pp. xxiii, 375; vi, 422. $8.)

Teilhac, E. *Histoire de la pensée économique aux Etats-Unis au dix-neuvième siècle.* (Paris: Recueil Sirey. 1928. Pp. 194.)

Teschemacher, H., editor. *Festgabe für Georg von Schanz zum 75 Geburtstag, 12 Marz, 1928.* Vols. I and II. (Tübingen: Mohr. 1928. Pp. viii, 439; vi, 441.)

Thompson, C. M. *Principles and practices of economics.* (Boston: Benjamin Sanborn. 1928. Pp. ix, 578. $3.50.)

This book is intended mainly for beginners in economics. There are many excellent graphs, and at the end of each chapter a long list of class exercises.

Without intending any particular criticism of the book, the reviewer would like to raise the question whether brevity is not too often assumed to mean simplicity and intelligibility. A book for advanced students may properly be brief, for the students can furnish from their own knowledge the explanatory and illustrative material that the author omits. Elementary students, however, should have an abundance of illustrative material, or the principles will mean little to them. Should not elementary texts be books of considerable size and completeness?

John Ise

Thorp, W. L. *Economic institutions.* (New York: Macmillan. 1928. Pp. 306.)

This little book seems to be designed as an elementary text, although in some respects it is hardly elementary in its thought or exposition. The arrangement of material is far from conventional, with its six parts: (1) setting; (2) institution of machine technique; (3) institution of the price system; (4) institution of private property; (5) institution of busi-

ness enterprise; and (6) conclusion. Also, there is some original material in the book, including a considerable amount of statistical material. A well chosen bibliography is included at the end of each chapter.

JOHN ISE

YVES-GUYOT. *La science économique: ses lois inductives.* (Paris: Alfred Costes. 1928. Pp. xxii, 405. 20 fr.)

A compendium of the laws of political economy considered as an inductive science by one who was a foremost champion of liberalism alike against the monarchists and the socialists in France. The author's great erudition and lively style enable him to make illuminating criticism of economists past and present. With admirable brevity he helps to clear away ambiguities as to capital, value, deflation and the monetary stabilization in various countries. His remarks on the gold supply and its relation to general wealth are deserving of attention.

R. R. W.

ZIMMERMANN, K. *Das Krisenproblem in der neueren nationalökonomischen Theorie.* Abhandlungen aus dem Staatswissenschaftlichen seminar der Universität Halle-Wittenberg, 4. (Halberstadt: H. Meyer. 1927. Pp. ix, 143.)

Economic History and Geography

Eine Geschichte der wirtschaftlichen Entwicklung Englands. Band I *Von der Anfängen bis gegen Ende des 15. Jahrhunderts.* Band II. *Die Zeit des Merkantilismus.* By LUJO BRENTANO. (Jena: Fischer. 1927. Pp. viii, 396; 453.)

The present volumes carry the economic history of England to the end of the eighteenth century, leaving the nineteenth century to the third and final volume. In compass, therefore, this work will rank among the more substantial studies of English economic history. Indeed, Cunningham's volumes alone exceed it in scale of treatment; and no other single work equals this study, though the general histories by Lipson and Brodnitz would be closely comparable if carried to completion. The present study, however, differs from these other works in the frank subordination of detailed critical analysis to the broad problems of interpretation. These volumes are the outgrowth of lectures and the point of view of the lecture has been retained. There is little effort to present new documentary evidence on specific questions. Special literature and the readily accessible printed documents have been studied with discrimination and care, but the actual mass of material utilized is rather small. Generally, the basic literature has been used so that the narrow documentation does not seriously affect the text. Some omissions are to be regretted: Gras's *History of the English Corn Market* and Tawney's *Agrarian Revolution* in the sixteenth century would have added to the history of agriculture.

The interest of the work, however, is not significantly qualified by the deliberate abandonment of any attempt to make a contribution to critical discussion of the record. Professor Brentano has concerned himself primarily with the expository and narrative problems of the presentation of economic history; and, as these elements of the task have been seriously neglected in the past, the present contribution is of genuine importance.

The first volume which is devoted to the Middle Ages is concerned with the rise and decline of feudal institutions. Although many economic phenomena are incidentally involved, the interest and structure of the exposition is dominated by legal and constitutional problems. A number of chapters drift off into a history of the struggle between the crown and the barons, scarcely diverging in tone from texts professedly concerned with constitutional history. These difficulties are, of course, common to much historical writing; and we have yet to achieve a satisfactory distinction between the economic and the legal elements of the problems of the feudal period. The rural organization is sharply contrasted with the urban; town life escaped from the system of personal subjection and was organized upon a basis of voluntary association. The attempt to build up a sharp antithesis here leads to characteristic interpretations of many of the problems of the history of gilds; and the old controversy over the origin of the gild merchant is unhappily revived. Here again constitutional and legal problems dominate the narrative and obscure the acomic phenomena. The primary facts of industrial and commercial organization appear somewhat incidentally in the course of the exposition, but without the emphasis and prominence that would be desirable.

These matters could have been more effectively presented if the thesis about capitalism had been more adequately worked into the text of the first volume. Professor Brentano makes use of the theses of the essays published in "Der Wirtschaftende Mensch in der Geschichte." Capitalism is defined as a form of organization based upon profit seeking and free contractual relations. It is contrasted with the elements of status present in feudal-Christian society, based upon the concept of authority and the presumption that spiritual values should dominate all social relations. He holds that capitalism was not wholly absent from ancient or from feudal-Christian society: that the notions of capitalist organization were preserved and developed in the Byzantine Empire, whence they spread by way of Italy to northwest Europe. Conditions in England were especially favorable to the development of capitalism, and consequently the history of England is particularly important. These interesting theses, however, are stated briefly in the beginning of the second volume, without exerting

much influence upon the actual exposition. In effect, therefore, the first volume is concerned with the rise and decline of the feudal order, with primary emphasis on legal and constitutional questions.

We must not take leave of the first volume, however, without calling attention to the notable introduction. Four chapters are devoted to a commanding analysis of the economic organization of the Celtic and Teutonic peoples and of economic conditions in Gaul under the Empire. The difficult problems of this period are presented with unusual skill, clarity of thought, and maturity of judgment. The essential continuity of economic development is brought out with unusual vividness.

The second volume deals with the rise of capitalism and the development of national policy. The mercantilistic policy in its narrower sense is studied in relation to the development towards absolutism and the Machiavellian concept of statecraft as an unqualified creative power to accomplish one's will. The fiscal necessities of the sovereign made treasure and power almost synonymous terms to the sixteenth century statesmen, and the naïve concept of creative statecraft speedily transformed old regulations into a coherent national policy. At its worst, this was beset by many naïve errors and by not a few inconsistent aims; but the more serious errors ceased to play any significant part in actual thought, and, despite the survival of various naïve catch-words, a national economic policy of genuine significance was gradually evolved. The most notable expression of English national policy is to be found in Cromwell, who is here placed in a more significant and favorable light than is accorded him by Cunningham. Despite the nominal reaction under the Restoration, Cromwell's policy was, in fact, maintained. The discussions of commercial affairs that followed gradually disposed of the more serious errors of analysis.

In the more general chapters the influence of Protestantism upon the development of capitalism is discussed. Brentano takes Weber's position that Puritanism gave a new ethical character to capitalistic modes of thought that had long been in existence. It, therefore, reconciled capitalistic thought more completely with a system of Christian ethics. One is led to expect rather more analysis of the development of capitalism than appears in the text, either in the history of the commercial companies or in the rather brief history of industry. Although the volume is evidently intended to exhibit the development of the two themes, capitalism and mercantilism, in fact the development of policy dominates the narrative so completely that the development of capitalistic methods is not clearly felt as a process.

Professor Brentano has made a most painstaking attempt to present a systematic and sustained interpretation of the economic history of

England. It is really the most careful and significant exposition which we now possess, but it still leaves much to be desired. The work discloses the nature of the difficulties of the presentation of economic history, and it should be fairly evident that no wholly adequate solution can be found in the various unifying themes here utilized. It is obviously desirable that there should be a closer bond between the medieval and early modern period, and it is clearly difficult to weave together such widely diverse elements as the capitalistic system of production and the development of the concept of creative statecraft. The unity actually achieved turns largely upon constitutional and legal concepts and tends to slip away from the economic phenomena.

The achievements of the present work are thus of a somewhat restricted character, but they are not for that reason to be undervalued. Professor Brentano has brought a mature and balanced judgment to his subject and enriched it at many points. In so far as he has failed of achieving all that might be desired of artistry in exposition and narration, the short-comings are the short-comings of this branch of learning. The specific historical problems that were brought forward by the German Historical School are more adequately treated and more thoroughly incorporated in the context of history than in any other work inspired by that group.

ABBOTT PAYSON USHER

Harvard University

NEW BOOKS

ASHLEY, W. *The bread of our forefathers: an inquiry in economic history.* (Oxford: Clarendon Press. 1928. Pp. xi, 206. $4.25.)

BOGARDUS, E. S. *A history of social thought.* 2nd ed. (Los Angeles: Jesse Ray Miller, 3566 University Ave. 1928. Pp. 668. $4.)

BONDE, W. *Das Probleme der Reparation.* Jena rechts- und wirtschaftswissenschaftliche Dissertationen. (Altenburg i. Thüringen: O. Bonde. 1928. Pp. viii, 164.)

BOULIN, P. *L'organisation du travail dans la région envahie de la France pendant l'occupation.* Econ. and soc. hist. of the World War. (New Haven: Yale Univ. Press. 1927. Pp. 181. $1.50.)

CHILDS, J. B. *Foreign government publications: survey of the more important accessions during the fiscal year ended June 30, 1927.* (Washington: Supt. Docs. 1928. Pp. 9.)

COLE, A. H., editor. *Industrial and commercial correspondence of Alexander Hamilton, anticipating his report on manufactures.* (Chicago: Shaw. 1928. Pp. xxviii, 334.)

CROSS, A. L. *Eighteenth century documents relating to the royal forests, the sheriffs and smuggling.* Univ. of Michigan pub. (New York: Macmillan. 1928. Pp. xvii, 328.)

DEROOS, R. B. *Industrie, Kapitalmarkt und industrielle Effekten in den Niederlanden.* Vols. I and II. (The Hague: Martinus Nijhoff. 1928. Pp. xiii, 177; vii, 72. 6.40 Gld.)

An account of the industries, capital, banking and the exchanges in Holland. The second volume contains tables of statistics.

DOBB, M. *Russian economic development since the Revolution.* (New York: Dutton. London: Routledge. 1928. Pp. xii, 414. $5. 15s.)

EHRENBERG, R. *Capital and finance in the age of the Renaissance. A study of the Fuggers and their connections.* (New York: Harcourt Brace. 1928. Pp. 390. $4.50.)

ELLWOOD, C. A. *Cultural evolution. A study of social origins and development.* (New York: Century. 1927. Pp. viii, 267. $2.50.)

This book represents an attempt by one of our leading sociologists to popularize some anthropological lore. It is admitted, however, to be "merely an outline of the author's theory of human evolution, intended as" a text for sociology classes. It undertakes "an evaluation of the traditions of our civilization and of the various factors in social and cultural evolution."

An introductory section has chapters discussing various points of theory: the difference between social and cultural evolution; cultural stages; the nature, method, and causes of cultural evolution; and the origin of cultural patterns. The main part of the book is a series of thirteen chapters, each devoted to tracing the hypothetical development and present trend of some important cultural complex or institution. A final chapter gives a retrospect and prospect, with sharp accents in the progressive mood.

The chapters dealing with the development of tools, agriculture, and property may be of special interest to economists. But it must be pointed out that there is nothing in these chapters which cannot be secured from easily available and more authoritative books, especially those written by anthropologists. It should be added, also, that except for some material cited from Thomas' *Source Book for Social Origins* and similar compilations, there are almost no references to first-hand accounts of institutions as "going concerns" in primitive or early cultures.

MAURICE G. SMITH

FAUTEUX, J. N. *Essai sur l'industrie au Canada, sous le régime français.* Vols. I and II. (Quebec: Imprimeur du Roi. 1927. Pp. xx, 572.)

GEE, W. and CORSON, J. J., 3RD. *A statistical study of Virginia.* (University, Va.: Institute for Research in the Social Sciences. Dec., 1927. Pp. 201.)

An interesting exhibit of assembled statistical data relating to a single state. The figures are taken from the latest official publications, and the monograph as a whole deals with present conditions. The social and economic factors presented include population, health, education and the various branches of industry, taxation and debt. Tables are compiled not only for the state but also for the several counties.

GRATZ, G. and SCHÜLLER, R. *The economic policy of Austria-Hungary during the war, in its external relations.* Translated by W. ALISON PHILLIPS. Econ. and soc. hist. of the World War. (New Haven: Yale Univ. Press. Pp. 309. $3.50.)

HEALD-MENERY COMPANY, INC. *Commercial, geographical and recreational survey of the state of California: desk plot and index directory.* (San Francisco: Author, 1095 Market St. 1927. $10.)

KUHNERT, H., editor. *German commerce yearbook, 1928.* (New York: B. Westermann. 1928. Pp. 375. $5.)

Contains 43 articles by specialists in the various branches of industrial activity. Emphasis is given to factors which affect relationships between Germany and the United States, more particularly in trade, inventions, trademarks, postal and telegraph service. Among the industries treated in separate chapters are: agricultural, machine, cutlery, electro-technical, optical, leather, ceramic, chemical, paint and varnish, paper, book, cotton, silk, chocolate, film and toy industry.

KWIATKOWSKI, E. *The economic progress of Poland.* (Warsaw: Polish Economist. 1928. Pp. 72.)

LANDMANN, J. *Die Agrarpolitik des schweizerischen Industriestaates.* (Jena: Fischer. 1928. Pp. 128. Rmk. 4.)

The policy of Switzerland in relation to the land and the industries connected with it.

LEES-SMITH, H. B., editor. *The encyclopædia of the labour movement.* Vols. I-III. (London: Caxton Pub. Co. 60s.)

LIEU, D. K. *China's industries and finance. Being a series of studies in Chinese industrial and financial questions.* (Peking: Chinese Government Bureau of Econ. Information. 1927. Pp. xiv, 238.)

A western observer must regard with peculiar interest an evolution in industry, commerce, and finance, which, with many dissimilarities, yet repeats in large part our own somewhat earlier development,—in the organization and functions of the gilds, for example, and the emergence of the factory system with its familiar relation to the small shop and cottage industry. Banking in China gives an impression of maturity appropriate to a people commercially old, but an impression at the same time of an arrest in development, due to malnutrition, a lack of abundant capital which is the life of banking. The union of the deposit and lending functions—relatively new in the Occident—seems to be in full vigor in China; and in general the types of organization and of banking documents which are commonly employed in Europe are found there also. It is surprising to find a town of 300,000 people, Ningpo (p. 79) where money is rarely employed—even small retail purchases being made by a sort of giro system. But there appears at once the accompanying immaturity: the line of differentiation between banker and merchant has not been clearly drawn, and merchants as well as banks perform the service of transferring accounts between their customers. Again, when bankers have a surplus of funds they are impelled (p. 66) by the lack of an established investment market or a well developed commercial-paper market to speculate in merchandise, with frequent unhappy results.

Besides discussions on Chinese industrial development and financial organization, Mr. Lieu has assembled here several articles already published in various periodicals on government finance, the problem of foreign ownership of Chinese railways, silkweaving, and the iron and steel industry,—this last with details as to cost of production derived from his own experience as an accountant in several steel making enterprises. The whole work is a compact presentation of facts, largely statistical, to a con-

great interest and value, although, as the author observes, the statistics are in some parts almost valueless because of the local variations in standards of money, weights, and measures.

A.P.W.

McDaniel, R. C. *The Virginia Constitutional Convention of 1901-1902.* (Baltimore: Johns Hopkins Press. 1928. Pp. vii, 166.)

Mantoux, P. *The Industrial Revolution in the eighteenth century: an outline of the beginnings of the modern factory system in England.* Rev. ed. Translated by J. Vernon. (New York: Harcourt Brace. Pp. 539. $5.)

Marsh, M. A. *The bankers in Bolivia: a study in American foreign investment.* Studies in American imperialism. (New York: Vanguard Press. 1928. Pp. 247. $1.)

Marshall, L. C. *The story of human progress.* (New York: Macmillan. 1928. Pp. ix, 445. $3.50.)

A revision of a preliminary edition, published in 1923, and of the complete edition printed in 1925. Written for secondary schools.

Mortara, G. *Prospettive economiche. Anno ottavo, 1928.* (Milan: Università Bocconi. Pp. xv, 523.)

Mun, T. *England's treasure by forraign trade.* (New York: Macmillan. 1928. Pp. xiii, 88.)

A reprint published as the initial number of Economic History Classics. The title page is a facsimile copy of the original edition of 1664.

Murray, R. H., translator and editor *Mexico before the world: public documents and addresses of Plutarco Elias Calles.* (New York: Academy Press, 112 Fourth Ave. 1927. Pp. 244. $1.)

Neumeyer, M. E. *Die italienischen Gewerkschaften.* Heft 2. (Jena: Fischer.)

Ohlin, B. *The reparations problem.* Index, no. 28, April, 1928. (Stockholm: Svenska Handelsbanken. Pp. 40.)

Patton, K. S. *Kingdom of Serbs, Croats and Slovenes (Yugoslavia): a commercial and industrial handbook.* Trade promotion series, no. 61. (Washington: Supt. Docs. 1928. Pp. xiii, 261. 85c.)

Pringle, W. H., editor. *Economic problems in Europe to-day.* (New York: Macmillan. 1928. Pp. 157. $2.)

Rider, D. *Ten years' adventures among landlords and tenants.* (Garden City, N.Y.: Doubleday Doran. 1928. Pp. 342. $2.50.)

Robson, W. A. *Justice and administrative law: a study of the British Constitution.* (London: Macmillan. 1928. Pp. xviii, 346. 12s. 6d.)

Sarkar, B. K. *Empire development and world-economy: a study in the new foundations of national economy for India.* Economic brochures for young India, no. 8. Reprinted from the *Journal of the Bengal National Chamber of Commerce,* 1927. (Calcutta. Calcutta Oriental Press. Pp. 9.)

——————————. *Labour, property and tariff policies in statesmanship and political ideals from Bismarck to Lenin and Mussolini (1870-1927).* Economic brochures for young India, no. 12. Reprinted from the *Calcutta Review,* March, 1928. (Calcutta: University of Calcutta. 1928. Pp. 317.)

Sayous, A. E. *Les changes de l'Espagne sur l'Amérique au XVI^e siècle.* Extrait de la *Revue d'Economie Politique,* Nov.-Dec., 1927. (Paris: Recueil Sirey. 1927. Pp. 30.)

The means of exchange between Spain and Spanish America in the sixteenth century.

——————. *Les procédés de paiement et la monnaie dans l'Amérique Espagnole du XVI^e siècle.* Extrait de la *Revue Economique Internationale,* Nov., 1927. (Brussels: Goemaere. 1928. Pp. 34.)

Money and methods of payment in Spanish America in the sixteenth century.

Smith, W. D. *Physical and economic geography of Oregon.* Chapter XIII, *The Wallowa Mountains and County.* Vol. X, Jan., 1928. (Eugene, Oregon: Commonwealth Review of the Univ. of Oregon. 1928. Pp. 159-194.)

Spiegel, M. *Das völkerrechtliche Mandat und seine Anwendung auf Palästina.* (Leipzig: Leuschner & Yubsensky. 1928. Pp. 182. M. 7.50.)

The League of Nations and its system of mandates. The interpretation of the mandate relating to Palestine.

Stonham, J., editor. *Official yearbook of the Commonwealth of Australia.* No. 20. (Melbourne: H. M. Stationery Office. 1927. Pp. xxxi, 1037.)

Stuart, G. H. *Latin America and the United States.* 2nd ed. (New York: Century. 1928. Pp. viii, 465. $3.75.)

Thompson, J. W. *An economic and social history of the Middle Ages (300-1300).* (New York: Century. 1928. Pp. ix, 900. $5.)

Turnbull, A. D. *John Stevens: an American record.* (New York: Century. 1928. Pp. 562. $5.)

Vialatte, A. *Le monde économique, 1918-1927.* (Paris: Marcel Rivière. 1928. Pp. 260.)

Warmington, E. H. *Commerce between the Roman Empire and India.* (New York: Macmillan. 1928. Pp. x, 417. $6.)

White, J. *Forts and trading posts in Labrador Peninsula and adjoining territory.* (Ottawa: H. M. Stationery Office. 1926. Pp. 67.)

Application of the recommendations of the International Economic Conference. Report on the period May, 1927, to May, 1928, prepared for the first meeting of the Consultative Committee, May 14, 1928. (Geneva: League of Nations, Econ. and Finan. Section. 1928. Pp. 43.)

Colorado River development: economic necessity vs. political expediency. Bull. no. 5. (Salt Lake City: Colorado River Fact-Finding Committee of Utah. 1928. Pp. 14.)

Credit position of Japan. Bull no. 14. New York: Institute of International Finance. 1928. Pp. 27.)

Credit position of Latvia. Bull. no. 15. (New York: Institute of International Finance. 1928. Pp. 14.)

Essays on Canadian economic problems. Vol. I. (Montreal: Royal Bank of Canada. 1928.)

A series of slight essays on the following subjects: Japan—a growing factor in Canada's prosperity; Canada's potential trade with British West Africa; Canada's optimum of population and how it may be obtained; Does Canada need a federal farm loan system? Economic possibilities of the Maritime Provinces.

Industrie und Gewerbe, Handel und Verkehr im Lande Thüringen (nach den Ergebnissen der gewerblichen Betriebszählung vom 16. Juni 1925). (Jena: Fischer. Pp. vi, 83. Rmk. 2.50.)

The International Chamber of Commerce and the application of the policy of the World Economic Conference: memorandum presented to the Consultative Committee of the Economic Organisation of the League of Nations by the delegation of the International Chamber of Commerce. Brochure no. 64. (Paris: International Chamber of Commerce. 1928. Pp. 23.)

Japan. The twenty-seventh financial and economic annual of Japan. (Tokyo: Govt. Printing Office. 1927. Pp. vi, 228. 2 yen.)

The Maritime Provinces since confederation: a statistical study of their social and economic condition during the past sixty years. (Ottawa: H. M. Stationery Office. 1926. Pp. vi, 139.)

Includes a valuable statistical survey of physiography and natural resources, trend of maritime population 1861-1911, production and industry with special reference to the extractive industries, trade and transportation, wealth, and income, prices and the cost of living, public finance and education.

The New England economic situation. Papers by undergraduates in the classes of Edwin F. Gay and Allyn A. Young. (Chicago and New York: Shaw. 1927. Pp. x, 260.)

Contains papers on "Great fortunes in New England," by M. C. Stevens; "The influence of New England capital in America's railroad development," by G. Camp, Jr.; "The influence of legislative regulation upon the relative growth of national banks, state banks, and trust companies in New England, 1863-1924," by E. C. Marget; "The wage-earner and his savings deposits," by A. J. Saltman; "The development of cotton manufacturing in New England and in the South, 1900-1923," by M. Pepper; "The New England woolen and worsted industry," by A. G. Smith; "The New England boot and shoe industry," by W. M. Reynolds and S. M. Rosenberg; "The position of Massachusetts in the hosiery and knit goods industry," by D. N. Klarfeld; and "An inquiry into the causes of the decline of the automobile industry in New England," by C. J. Hoffman.

Note on industrial conditions in 1927. (Geneva: League of Nations. 1928. Pp. 54, mimeographed.)

Ten years of Soviet power in figures, 1917-1927. (Moscow: Central Statistical Board. 1927. Pp. xiv, 516.)

Die Wirtschaft Griechenlands: ein Vergleich mit der Vorkriegszeit. (Munich: Duncker & Humblot. 1928. Pp. 184.)

Agriculture, Mining, Forestry, and Fisheries

NEW BOOKS

Alsberg, C. L. and Taylor, A. B. *The fats and oils: a general view.* Fats and oils studies of the Food Research Institute, no. 1. (Stanford Univ., Calif.: Stanford Univ. Press. 1928. Pp. viii, 103.)

"A simple, elementary and non-technical exposition of the production, the technology and the inter-relations of the various fats and oils." Chapter 6 discusses international trade in these products.

Ashmead, D. C. *Mining of thin coal beds in the anthracite region of Pennsylvania.* Dept. of Commerce bull. 245. (Washington: Supt. Docs. 1927. Pp. vi, 113. 30c.)

Baumont, M. *La grosse industrie allemande et le charbon.* (Paris: Gaston Doin. 1928. Pp. 754.)

Bertolino, A. *Il latifondo siciliano.* (Siena: Circolo Giuridico della R. Università. 1927. Pp. 105.)

A description of the extent and character of the *latifondi,* the large and poorly cultivated estates in Sicily.

Burgess, E. W. *La "Non-partisan League." Une expérience américaine de socialisme d'état agraire.* (Paris: Marcel Giard. 1928. Pp. xii, 244. 28 fr.)

The attempt made by the farmers of North Dakota to gain through political power an escape from the oppression of the powerful firms of the east. The leadership of Townley in 1915 and the first promise of success is well described. The history is carried down to 1926.

Garratt, G. T. *Hundred Acre Farm.* (London and New York: Longmans Green. Pp. xvi, 142. 5s.)

Innis, H. A. *The fur-trade of Canada.* (Toronto: Oxford Univ. Press. 1927. Pp. 172.)

This volume by Professor Innis inaugurates a series of studies relating to the chief industries of Canada. Only traces of the history of the fur trade are contained in the book. In fact, the chief purpose is to present a definite idea of the position of the fur industry today. Thus, the discussion is confined largely to the matters relating to the present fur bearers of North America, to price movements of furs, and to the prospects of demand and supply. The author presents an interesting discussion concerning the questions of conservation, fur farming, the technique of manufacture, and of industrial organization. He devotes a chapter to the present marketing organization. The reader gains the impression that the resource is not only inadequate to the demand, but that the possibilities of conserving and increasing the supply have very definite limitations. Professor Innis maintains that there is little possibility of increasing the supply by opening new territory. While new methods of manufacture and dyeing the cheaper furs may tend to lighten the burden on the finer varieties, still the demand will continue to grow. He maintains that while fur farming will increase the output of fine furs, the ultimate prospect of this branch of the industry is in doubt. "The great bulk of the world's fine fur will continue to be produced by wild fur-bearers. The supply of wild animals is at present the crucial factor. . . . . As yet the probability of actually increasing the fur supply of Canada and the value of this important asset through constructive investigation and legislation, furthering the conservation and increase of natural resources in new countries is notoriously slight."

I. Lippincott

Lindgren, W. *Mineral deposits.* 3rd rev. ed. (New York: McGraw-Hill. 1928. Pp. 1049. $7.)

Nourse, E. G. *The legal status of agricultural coöperation.* Written with the aid of the council and staff of the Institute of Economics. (New York: Macmillan. 1927. Pp. xix, 555. $3.)

The purposes of this book, as enumerated by the author, are to set forth: (1) the economic philosophy of coöperative business as it has been evolved in the minds of so-called "coöperators;" (2) the manner in which these economic purposes have come to expression in specialized statutes; (3) the relation of these laws and the practices of coöperative associations to the general body of our commercial law; and (4) the attitude of courts in applying both general and special statutes to the cases which have come before them, noting particularly (5) the bearing of all this upon the question of competition, business stabilization and restraint of trade.

The author points out how the corporation has proved ill adapted to the needs of farming, and how in various ways the development of coöperation has had the general effect of eliminating waste and increasing efficiency, and of securing a more equitable distribution of control and benefits of the system of production and distribution. There are interesting and enlightening discussions of the early beginnings of coöperation, of the influence of the Rochdale system, of the emergence of the non-profit and non-stock association, with careful analysis of the various types of such associations, of so-called "commodity marketing," and of the drive for a uniform statute on coöperation, of the federation, and centralization of coöperatives, of the various types of coöperative pools, membership contracts and contract enforcement devices, and their relation to the law regarding restraint of trade. The question of restraint of trade is treated with particular fullness and penetration. There are appendices covering a number of the important statutes, contracts and agreements.

Through long study and close contact with the coöperative movement, Professor Nourse brings to this investigation a philosophical insight into the coöperative movement which few men have; and the legal aspects of the question have been analyzed with care and discrimination. Altogether the book is the most illuminating contribution on the subject of agricultural coöperation that the reviewer has yet seen.

John Ise

McPherson, J. B. *Annual wool review, 1927.* Extra bull. no. 1, vol. LVIII. (Boston: National Assoc. of Wool Manufacturers. March, 1928. Pp. 107-244. 50c.)

Patton, H. S. *Grain growers' coöperation in Western Canada.* (Cambridge: Harvard Univ. Press. 1928. Pp. xix, 471. $5.)

Rice, G. S. *Safety in coal mining: a handbook.* Dept. of Commerce bull. 277. (Washington: Supt. Docs. 1928. Pp. vi, 141. 25c.)

Rice, G. S. and Davis, J. A. *Potash mining in Germany and France.* Dept. of Commerce bull. 274. (Washington: Supt. Docs. 1927. Pp. v, 92. 25c.)

Snodgrass, K. *Copra and coconut oil.* Fats and oils studies of the Food Research Institute, no. 2. (Stanford Univ., Calif: Stanford Univ. Press. 1928. Pp. xiii, 135.)

"A comprehensive study of a commodity that was 'discovered' during the war and has since become of great importance in American usage."

Teele, R. P. *The economics of land reclamation in the United States.* (Chicago: Shaw. 1927. Pp. 329. $4.)

Zon, R. and Sparhawk, W. N. *America and the world's woodpile.* U. S. Dept. of Agric. circ. no. 21. (Washington: Supt. Docs. 1928. Pp. 16. 5c.)

The representation and organisation of agricultural workers. Studies and reports, series K (agriculture), no. 8. (Geneva: International Labour Office. 1928. Pp. 210. 3s. 75c.)

Soviet oil industry: a compilation of statements regarding purchases of Soviet oil by the Standard Oil Company of New York and the Vacuum Oil Company. (New York: Amtorg Trading Corp., 165 Broadway. 1927. Pp. 31.)

Manufacturing Industries

NEW BOOKS

Abbott, J. S. *False advertising: an exposé of the propaganda against margarine and the margarine industry.* Bull. no. 12. (Washington: Institute of Margarine Manufacturers, 1049 Munsey Bldg. 1928. Pp. 23.)

Daugherty, C. R. *The development of horsepower equipment in the United States.* A thesis. (Philadelphia: Univ. of Pennsylvania. 1927. Pp. 112.)

A doctoral thesis from the University of Pennsylvania, and a reprint from Water Supply Paper 579, published by the U. S. Geological Survey.

Daugherty, C. R., Horton, A. H. and Davenport, R. W. *Power capacity and production in the United States.* U. S. Geol. Survey, Water-Supply Paper 579. (Washington: Supt. Docs. 1928. Pp. 210. 30c.)

Manchester, H. *Fifty years of match making, 1878-1928.* (New York: Diamond Match Co. 1928. Pp. 20.)

Moebius, K., editor. *Handbuch der Eisen- und Stahl-Waren-Industrie. Jahrgang 1928-29.* Deutsche Wirtschaftsbücherei, Band VI. (Berlin: Verlag für Börsen- und Finanzliteratur. 1928. Pp. xviii, 591, 87.)

Schumann, O. *Die Landeshuter Leinenindustrie in Vergangenheit und Gegenwart. Ein Beitrag zur Geschichte der schlesischen Textilindustrie.* Band XIX, Heft 1. (Jena: Fischer. 1928. Pp. ix, 138. Rmk. 7.50.)

Warshow, H. T., editor. *Representative industries in the United States.* (New York: Holt. 1928. Pp. xiii, 702.)

Electric-power industry, supply of electrical equipment and competitive conditions. 70th Congress, 1st sess., Senate Doc. 46. (Washington: Supt. Docs. 1928. 45c.)

Facts and figures of the automobile industry. 1928 ed. (New York: National Automobile Chamber of Commerce. 1928. Pp. 96.)

Preliminary report: central electric station idustry in Canada, 1926 (Ottawa: H. M. Stationery Office. 1928. Pp. 7, mimeographed.)

Transportation and Communication

NEW BOOKS

Brown, C. K. *A state movement in railroad development.* Univ. of N. C. soc. study ser. (Chapel Hill, N.C.: Univ. of N.C. Press. 1928. Pp. 312. $5.)

CONROY, J. C. *A history of railways in Ireland.* (London: Longmans Green. 1928. Pp. viii, 382. 15s.)

DAGGETT, S. R. *Principles of inland transportation.* (New York: Harper. 1928. Pp. xvii, 705. $4.)

ELDERTON, W. P. *Shipping problems, 1916-1921.* (New York: Macmillan. 1928. Pp. vi, 87. $1.25.)

GIESE, K. *Hauptfragen der Reichsbahnpolitik.* (Berlin: J. Springer. 1928. Pp. ix, 186.)

GJERSET, K. *Norwegian sailors on the Great Lakes: a chapter in the history of American inland transportation.* (Northfield, Minn.: Norwegian-American Hist. Assoc. 1928. Pp. xii, 211.)

There is a suggestion of the old viking spirit in the energy and zeal of the Norwegian-American Historical Association. Since its formation scarcely three years ago, it has brought out two volumes of *Studies and Records,* two volumes of *Travel and Description,* and now it presents in this latest publication a kind of *Who's Who* of Norwegian seamen engaged in lake shipping, past and present, with some middle chapters devoted to an historical sketch of lake transportation. Until the early eighties sailing vessels and the owner-captain type of management predominated. Norwegian immigrants took readily to this lake seafaring as conditions were essentially the same as those to which they were accustomed, and because of the opportunity for more home life than on ocean voyages. Probably by 1869-1870, not less than fifty per cent of the seamen on Lake Michigan were Norwegian (p. 77), and today such men are still numerous on the Great Lakes. They are intensely individualistic, democratic, and conservative, and thus lack a capacity for coöperation. This largely explains why the Norwegian-American element has had no part in creating the modern large-scale organizations which now control the lake shipping industry, and which have introduced the huge steel freighters and other facilities so that it is possible, for instance, to unload 12,260 tons of ore in seventeen minutes with the labor of four men. The book needs rewriting with an eye to brevity and better organization. There are many pictures and a careful index.

A. C. FORD

HAMACHER, R. *Der Personenverkehr Kölns.* (Köln: Oskar Müller. 1928. Pp. 64.)

A detailed account of the transportation system of Cologne and its neighborhood, with a map.

HUNGERFORD, E. *The story of public utilities.* (New York: Putnam. 1928. Pp. 398. $2.50.)

MANN, B. H. *Means of accelerating freight trains: management and man.* Freight train economies, no. 5. Including reprint from proceedings of American Assoc. of Railroad Supts. (Webster Groves, Mo.: Author, 161 S. Elm Ave. 1928. Pp. 48.)

NORRIS, H. H., editor. *Popularizing public transportation.* (New York: American Electric Ry. Assoc. 1928. Pp. xi, 254.)

A digest of presentations made by electric railways on August 1, 1927, to the Charles A. Coffin Foundation. Fifth in the series of "Electric Railway Practices."

Wallace, F. W. *In the wake of the wind-ships. Notes, records and biographies pertaining to the square-rigged merchant marine of British North America, illustrated by photographs and drawings.* (Toronto: Musson Book Co. 1927.)

A continuation of the volume *Wooden Ships and Iron Men* with the same invaluable collection of material on the sailing vessels of Quebec, Nova Scotia and New Brunswick.

American Electric Railway Association. Proceedings of the twenty-fifth annual convention of the American Electric Railway Engineering Association, October 3-7, 1927. (New York: American Electric Ry. Assoc. 1927. Pp. 739.)

Freight commodity statistics: Class I steam railways in the United States, year ended December 31, 1927. Interstate Commerce Commission, Statement no. 28100. (Washington: Supt. Docs. 1928. Pp. 135.)

Interstate Commerce Commission Reports, Vol. 124. Decisions of the Interstate Commerce Commission of the United States, March to July, 1927: finance reports. (Washington: Supt. Docs. $2.25.)

Interstate Commerce Commission: 41st annual report, December 1, 1927. (Washington: Supt. Docs. 1927. Pp. v, 319. 75c.)

National Association of Railroad and Utilities Commissioners. Proceedings of thirty-ninth annual convention, held at Dallas, Texas, October 18-21, 1927. (New York: Author, 270 Madison Ave. 1927. Pp. 600. $5.)

Report of a survey of transportation on the state highways of Vermont. By the Bureau of Public Roads, U. S. Dept. of Agric., and the Vermont State Highway Dept. (Washington: Supt. Docs. 1927. Pp. 80.)

Statistics of railways in the United States for the year ended December 31, 1926. Fortieth annual report of the Interstate Commerce Commission. (Washington: Supt. Docs. 1928. Pp. cxxxviii, 274.)

Suburban service: brief list of references. (Washington: Library, Bureau of Railway Economics. 1928. Pp. 13, mimeographed.)

Trade, Commerce, and Commercial Crises

NEW BOOKS

Heaton, H. *History of trade and commerce, with special reference to Canada.* (Toronto: Thomas Nelson. 1928. Pp. xii, 334.)

Ishizaki, M. *Le droit corporatif international de la vente de soies.* Vols. I-III. (Paris: Marcel Giard. 1928. Pp. xxxii, 344; 363; 264.)

A very elaborate account of the customs and laws relating to international trade in silk. The third volume contains the rules and forms of contract used in Lyons, New York, Yokohama and other centers of the silk trade.

Kirsh, B. S. *Foreign trade functions of trade associations: the legal aspects.* Reprinted from the *Univ. of Pennsylvania Law Review*, vol. 76, June, 1928. (Philadelphia: Univ. of Pa. 1928. Pp. 35.)

Litman, S. *Essentials of international trade.* 2nd rev. ed. (New York: Wiley. 1927. Pp. xii, 380. $3.50.)

The second edition of Dr. Litman's book includes four new chapters; one upon the fundamentals and theory of international trade, another upon progress and tendencies in world trade, a third upon the exporting

of raw materials and foodstuffs, and a fourth upon import agencies and methods. Statistical and other data are brought up to date. Certain chapters upon commercial policy and foreign investment have necessarily been very considerably revised.

The new chapters constitute a distinct addition to the work, although the detailed treatment of importing and customs procedure seems somewhat out of place in an elementary work. As a whole, the material is logically arranged and well selected.

H.R.T.

ROBERTSON, J. M. *The political economy of free trade.* (London: King. 1928. Pp. ix, 190. 8s. 6d.)

VLEESCHHOUWER, J. E. *Actieve handelspolitiek feiten en uitkomsten.* (The Hague: Martinus Nijhoff. 1927. Pp. xi, 251.)

WERGO, H. *Freihandel und Schutzzoll als Mittel staatlicher Machtentfaltung.* Untersuchungen zur Problematik der Handelspolitik, Band 45. (Jena: Fischer. Pp. xv, 123. Rmk. 6.)

Teamwork for greater foreign trade. Addresses delivered at group luncheon of Foreign Commerce Dept., May 8, 1928, and at General Session of the Chamber of Commerce of the U. S., May 11, 1928. (Washington: Chamber of Commerce of the U. S. 1928. Pp. 33.)

Accounting, Business Methods, Investments and the Exchanges

NEW BOOKS

BARTH, F. E. *Tanning and leather products costs.* Official pubs., vol. IX, no. 20. (New York: National Assoc. of Cost Accountants. 1928. Pp. 1181-1198. 75c.)

BEDAUX, C. E. *European manufacturing methods and costs.* Official pubs., vol. IX, no. 19. (New York: National Assoc. of Cost Accountants. 1928. Pp. 1111-1132. 75c.)

BUCKLEY, H. J. *Relation between sales promotion and accounting.* Official pubs., vol. IX, no. 16. (New York: National Assoc. of Cost Accountants. 1928. Pp. 925-940. 75c.)

BUDD, T. A. and WRIGHT, E. N. *The interpretation of accounts.* (New York: Prentice-Hall. 1927. Pp. xi, 416. $5.)

It was the intention of the authors of this volume to prepare a book suitable for those interested in financial records as prospective executives and investors. They have attempted to carry out their purpose by showing how the accounts are constructed upon the books and how the statements are made from these accounts. Only one chapter of the book deals with the analysis of the statements. The book contains little that is new; but it comprehends most of the points usually found in modern general accounting texts, and the content is presented in an interesting and readable manner. Each chapter is followed by questions and problems. The scope of the work can be shown clearly by means of the chapter headings, dealing with the philosophy of accounts, individual proprietorship and partnership, the corporation, revenue, expense, profit and loss, interest and discount, depreciation, appreciation, the income statement, the balance sheet, consolidated balance sheets, and analysis of statements.

A.W.H.

Calkins, E. E. *Business the civilizer.* (Boston: Little Brown. 1928. Pp. 317. $3.)

Chassee, L. J. and O'Neill, E. C. *Management of personal income.* (Chicago: Shaw. 1927. Pp. 160. $1.75.)

Converse, P. D. *Selling policies.* (New York: Prentice-Hall. 1927. Pp. xvii, 706. $5.)

A business man's book, supplementing the author's earlier volume on *Marketing.* This deals more particularly with *policies.* Part 2 treats market research through internal records, field surveys and questionnaires, with a chapter on problems. Under "Product and policy" the author discusses the relation of product to policy; the alternatives of operating versus shutting-down; packaging merchandise, and service. Part 4 considers price policies, including a chapter on price cutting. Part 5 is concerned with methods of distribution; Part 6, with advertising and influences which create demand; Part 7, with purchasing; and Part 8 with credit, including instalment plans. Specific problems cover 100 pages.

Davis, R. C. *The principles of factory organization and management.* (New York: Harper. 1928. Pp. xxi, 449. $5.)

Dicksee, L. R. *Published balance sheets and window dressing.* (London: Gee & Co. 1927. Pp. viii, 62. 5s.)

DuBrul, E. F. *Unintentional falsification of accounts.* Official pubs., vol. IX, no. 18. (New York: National Assoc. of Cost Accountants. 1928. Pp. 1035-1058. 75c.)

Englehardt, N. L. and Englehardt, F. *Public school business administration.* (New York: Teachers Coll., Columbia Univ. 1927. Pp. 1082. $7.50.)

Filfus, N. *Principles and exercises in accounting.* (New York: Globe Book. 1928. Pp. 208. $1.60.)

Grayson, T. J. *Investment trusts: their origin, development and operation.* (New York: Wiley. 1928. Pp. xv, 434. $5.)

Griffin, C. E. *Sales quota systems.* Michigan business studies, vol. I, no. 5. (Ann Arbor: Univ. of Michigan, Bureau of Business Research. 1928. Pp. 43. 50c.)

Hart, C. S. *Foreign advertising methods.* (New York: De Bower Pub. Co., 1 Park Ave. Pp. 275. $3.)

Hotchkiss, E. W. *A manual on the law of bills of lading and contracts of lading.* (New York: Ronald. 1928. Pp. xvii, 287. $5.)

Describes development of bills of lading, obligations and rights of parties, negotiability and various liabilities created by uniform bill of lading acts and the Federal Bills of Lading act of 1916. Part 2 treats of export bills. In the appendices, covering nearly half the volume, are forms and texts of acts, including the British Carriage of Goods by Sea act of 1924.

King, J. S. *Cost accounting applied to agriculture as an aid to more productive farming.* Reading Univ. studies. (New York: Oxford. 1927. Pp. 196. $2.50.)

Lansburgh, R. H. editor. *Standards in industry. The recent development in standards of product, material, equipment, and performance in industry and the effect of these on current economic conditions.* An-

nals, vol. CXXXVII, no. 226. (Philadelphia: Am. Academy of Pol. and Soc. Science. 1928. Pp. viii, 282. $2.)

Lee, J., editor. *Dictionary of industrial administration. A comprehensive encyclopædia of the organisation, administration, and management of modern industry.* Vol. I, part I. (London: Pitman. 1928. Pp. xv, 48. 1s. 3d.)

Metcalf, H. C., editor. *The psychological foundations of management.* (Chicago and New York: Shaw. 1927. Pp. vii, 309.)

This collection of lectures represents more than a series of psychological addresses to business men; it is an analysis of actual management problems made by the most competent critics, those who are in constant contact with such problems: H. S. Dennison, president of the Dennison Company, J. A. Garvey, personnel manager of the Dennison Company; C. S. Yoakum, professor of personnel management at the University of Michigan; H. S. Person, managing director of the Taylor Society, M. P. Follett, lecturer; W. V. Bingham, director of the Personnel Research Federation; Elton Mayo, professor of industrial research at the Harvard School of Business Administration, and H. A. Overstreet, professor of philosophy at the College of the City of New York.

Chief emphasis in the volume is placed on the need of considering not merely the one salient factor affecting the problems of industry, indeed not merely the many different factors, but the ways in which the several factors affect each other.

It seems that both science and industry are through with easy formulæ and simple solutions, and have gone to work to find out the results of complications of influences. The oversimplified psychology of thwarted instincts has been overthrown by the influence of the Gestalt psychology. Not that thwarted instincts do not still appear in industry; but the causes of repression and the modes of satisfaction are not identical for any two workers; and the solution of the problem requires a consideration of the worker's whole life—at least, his whole present life. As Mr. Dennison says, "No man is a simple unit even in himself. We have to consider what variety of influences play upon him to bring out all that is in him." Especially significant among these influences are social contacts. Mr. Dennison looks forward to the day when we may have valid temperament tests in order that men may do work suitable to them, with suitable people around and over them.

Mr. Garvey cites his valuable experience in producing harmonious influences in the Dennison Company, stating the practical expedients he employs in establishing a cordial esprit between the foreman and the personnel department on the one hand, between the foreman and the workmen on the other. He finds loyalty not to be any mystical composite of instincts, but an integration of attitudes which industry itself produces in men.

This same fact of experience is expressed by Dr. Yoakum: "The conditions in which we live are the principal determiners of the point of view we hold with respect to all of the social and economic activities about us." And furthermore, these conditions may also be determiners of our demonstrated abilities or apparent disabilities. Dr. Yoakum believes it is a joint responsibility of school and industry to find out the capacities of human beings and thus avoid the great wastage in inefficiency and un-

happiness. The case studies so generously sprinkled throughout his lectures illustrate many avenues of improvement in understanding, in placement, in development.

The possibilities of training we have hardly begun to realize. Dr. Bingham points out that even leadership can be developed. It is no magic trait which heredity either does or does not endow us with; rather, it consists of several traits susceptible to training, as the analysis of Craig and Charters shows.

Dr. Person and Dr. Mayo stress the problems of fatigue and show how completely fatigue is identified with the whole life, as against the common assumption that fatigue is purely the result of muscular exertion. As Dr. Mayo points out, the happily married woman can do routine work without boredom; the domestically unhappy woman needs interesting work to atone for her status.

The lectures of Dr. Follett seem to constitute the central theme of the book, that human analysis must be psychological rather than merely logical. Life does not consist of economic and ethical problems; but it consists of human problems with economic and ethical aspects. In departmentalized thinking we lose sight of the important fact of experience—integration. Industry cannot be concerned merely with a man's skill; it must be concerned also with his interest in his job, his ability to work in a group, and his ability to get along with his foreman; and particularly industry must be concerned with the effect of these factors on his skill and the effect of his skill on these factors.

C. L. Stone

Nichols, F. G. *A new conception of office practice based on an investigation of actual office requirements.* Bull. no. 12. (Cambridge: Harvard Univ. Press. 1927. Pp. 123.)

Parker, E. B. *Responsibilities of business. A resolution adopted at the 16th annual meeting of the Chamber of Commerce of the United States held in Washington, D.C., May 11, 1928.* (Washington: Chamber of Commerce of the U. S. 1928. Pp. 25.)

Patterson, E. M. *Tests of a foreign government bond.* (New York: Payson & Clarke. 1928. Pp. 224. $2.50.)

Rice, S. O. and others, editors. *Advertising investment securities.* (New York: Prentice-Hall. 1928. Pp. 324. $5.)

Robb, J. F. *Patent essentials for the executive, engineer, lawyer and inventor.* Rev. ed. (New York: Funk & Wagnalls. 1928. Pp. 467. $5.)

Rossi, D. I. P., compiler. *International finance source book: a bibliography for those interested in foreign securities.* (Chicago: Investment Bankers Assoc. of America, 105 S. LaSalle St. 1928. Pp. vii, 179.)

A bibliography of 1700 sources of information on the finances of 42 countries. This will prove a valuable reference book for students of international finance.

Sarkar, B. K. *Investment and business organization for Bengal capitalists.* Economic Brochures for young India no. 7. Reprinted from the *Journal of the Bengal National Chamber of Commerce.* (Calcutta: Calcutta Oriental Press. 1927. Pp. 10.)

Schmalz, C. N. *Standard departmental stock-sales ratios for department stores.* Michigan business studies, vol. I, no. 4. (Ann Arbor: Univ. of Michigan, Bureau of Business Research. 1928. Pp. 62. 50c.)

Shepard, G. H. *The elements of industrial engineering.* (Boston: Ginn. 1928. Pp. 553. $4.80.)

Smith, E. D. *Psychology for executives.* (New York: Harper. 1928. Pp. xii, 262. $3.50.)

What industry needs in the solution of so many of the difficult problems of personnel is not so much professional psychologists as executives and foremen who have an understanding of psychology. This volume is dedicated to such an understanding: it treats the fundamental constitution of human nature, the ways in which habits develop, the influence of habits on thought, the psychological aspects of personality, and the influence of groups on the individual. Among the practical issues treated are the use of tests, the right methods of training, shop committees, racial groups, sabotage, discipline, problems on monotony, conflicts in desires, effects of anger and fear, neurotic trends, and reactions to the foreman's personality. The psychology is sound and to the point.

Several pages at the end of the book are devoted to suggestions for further reading. The bibliography is both especially good and especially helpful in its annotations.

C. L. Stone

Stead, F. R. *Business balance sheets: their construction and criticism.* (New York: Pitman. 1927. Pp. 159. $3.)

Strawn, S. H. *Business and the law. Address delivered at 16th annual meeting of the Chamber of Commerce of the United States, Washington, D.C., May 9, 1928.* (Washington: Chamber of Commerce of the U. S. 1928. Pp. 11.)

Swensrud, S. A. *Methods of departmentizing merchandise and expense figures for plumbing and heating supply wholesalers.* Bull. no. 72. (Boston: Harvard Univ. Bureau of Business Research. 1928. Pp. iv, 35.)

Toulmin, H. A., Jr. *Patent law for the inventor and executive.* (New York: Harper. 1928. Pp. xi, 288. $4.)

Written by a patent lawyer.

Wiedenfeld, K. *Gewerbepolitik. Enzyklopaedie der Rechts- und Staatswissenschaft.* Band XXXIX. (Berlin: Julius Springer. 1927. Pp. x, 213. Rm. 9.60.)

From the title one might be induced to expect a treatment of the social control of business, of the regulation of the activities of industry by the state. This problem is indeed taken up in the last fifth of the book, but the main part is devoted to a description of the forms and tendencies of industrial organizations: small or large units, combinations, integration (vertical or horizontal), and the different kinds of cartels and syndicates. At the same time, in illustrating these tendencies, an accurate and actual picture of German industries is given, and comparisons are made with the forms of organization in the United States and England. International trusts and cartels are treated somewhat too briefly.

The strength of the book lies in the wide personal experience of the author, who is able to show clearly how the personal influence of industrial leaders is often more effective than the objective factors; the latter, the advantages and shortcomings of the different kinds of organization, are analyzed carefully in their relations to the costs of production and

distribution, prices, consumers, laborers, and last but not least to the problem of bureaucracy *vs.* entrepreneurship.

The author's treatment of social control is disillusioning, since he shows that most of the German laws made after the war intended to regulate cartels, to prepare for the "socialization" of certain basic industries and to foster industrial democracy by labor councils, have not succeeded in producing the expected result.

R. M. Weidenhammer

Bell Telephone securities: reference tables and descriptions for the use of bankers and investment houses, with a brief introductory statement of the organization and financing of the American Telephone and Telegraph Company and associated companies. (New York: Bell Telephone Securities Co. 1928. Pp. 66.)

Current cost literature. Official pubs., vol. IX, no. 18. (New York: National Assoc. of Cost Accountants. 1928. Pp. 1107-1110.)

Employee stock purchase plans in the United States. (New York: National Industrial Conference Board. 1928. Pp. xi, 245. $2.50.)

Describes in minute detail stock ownership plans, their operation, and the advantages and disadvantages which may accrue to the employees. The volume as a whole provides the most complete collection of data which has appeared. The editors are cautious in expressing a final judgment as to the ultimate significance of stock ownership.

New York Stock Exchange. Report of the president, May 1, 1927—May 1, 1928. (New York: N. Y. Stock Exchange, 11 Wall St. 1928. Pp. 92.)

Operating expenses of department stores and departmentized specialty stores in 1927: preliminary report. Bull. no. 74P. (Boston: Harvard Univ. Bureau of Business Research. 1928. Pp. 11. 50c.)

Record book of business statistics. Part 2, *Metals and machinery.* Supplement to *Survey of Current Business.* (Washington: Supt. Docs. 1928. 10c.)

Report of the Economic Consultative Committee on its first session, held in Geneva from May 14th to 19th, 1928. (Geneva: League of Nations. 1928. Pp. 28. 1s.)

The use of research in advertising. Series of reports on applying research to sales, no. 4. (New York: Policyholders Service Bureau, Metropolitan Life Insurance Co. Pp. 15. Gratis.)

Capital and Capitalistic Organization

NEW BOOKS

Coleman, G. M. *Capitalist combines.* Workers' Educ. Assoc. outlines. (New York: Longmans Green. 1927. Pp. 90. 75c.)

Freude, S. *Der schwedische Zuendholztrust.* Nürnberger Beiträge zu den Wirtschaftswissenschaften, Heft 8. (Nürnberg: Krische & Co. 1928. Pp. viii, 95.)

Grayson, T. J, and Gadsden, P. H. *Public utility economics.* Official pubs., vol. IX, no. 17. (New York: National Assoc. of Cost Accountants. 1928. Pp. 983-996. 75c.)

Gordon, A. P. L. *The problem of trust and monopoly control.* (London: Routledge. 1928. 5s.)

Levy, H. *Monopolies, cartels and trusts in British industry.* (London: Macmillan. 1927. Pp. xxi, 356. $5.)

This study represents a revision of the author's earlier work, *Monopoly and Competition* (London: 1911. English edition of *Monopole, Kartelle und Trusts,* Jena, 1909. Revised German edition, 1927.). The newer study follows the same general plan of the earlier work. Beginning with an historical account of the rise and fall of monopoly in Great Britain in the sixteenth and seventeenth centuries, the volume proceeds to a discussion of the doctrine of free competition and its manifestation in and influence upon British industrial life prior to the middle of the nineteenth century. The historical material of the earlier edition, as might have been expected, has undergone no revision for the new edition. The major portion of the study is devoted to a discussion of the modern organization of British industry, and it is here that the author's thesis—that in the long run free competition tends and is bound to give way to concentration—is developed. It is here also that the major work of revision has taken place. To the chapter on "The existing monopolist organizations in English industry" has been added an account of the artificial silk trust, the chemical industry trust, and the mineral oil companies, together with a discussion of post-war developments in the various industries previously considered.

Professor Levy's earlier study has been appropriately regarded since its appearance as an authoritative discussion of the trend towards concentration in English industrial life and the contrast between this and the more rapid development within America and Germany. British industrial developments since the first appearance of this work have tended to bear out the author's thesis. Professor Levy is fully aware of the changing character of industrial society and of the fact that even the verities of economic science are not so eternal as is sometimes supposed. These newer English developments mark to him the "ebbing of the age of competition whose everlasting continuation no man doubted for a whole century, and the beginning for a second time of an age of industrial monopoly." Nor are these changes unwelcome to Professor Levy. He seems to regard monopoly as the inevitably alternative system of industrial organization; however, he fails to consider adequately the broader problem of the social control of business.

George Ward Stocking

Nadas, L. *Das ungarische Kartell- und Konzernrecht.* Kartell- und Konzernrecht des Auslandes, Heft 3. (Berlin: Carl Heymann. 1928. Pp. viii, 81.)

Raushenbush, H. S. and Laidler, H. W. *Power control.* (New York: New Republic. 1928. Pp. x, 298. $1.)

This volume is the outcome of research by a committee on giant power and submitted as "somewhat in the nature of a reply to the power lobby." Successive chapters discuss concentration of control, rates, regulation, municipal ownership, and the controversies relating to Boulder Dam, the St. Lawrence, and Muscle Shoals.

Rousiers, P. de. *Les grandes industries modernes.* Vol. V. *Les industries chimiques: le régime légal des Ententes.* (Paris: Armand Colin. 1928. Pp. 254. 12 fr.)

This is the last volume of the series on the large industries of today. The first part describes the conditions of the chemical industries which require extensive plants, and production on a large scale. The second part gives an account of trusts and cartels and of the legislation affecting them in the United States, in England and in Germany.

R. R. W.

Sarkar, B. K. *Trusts and rationalization: aspects of the new Industrial Revolution.* Reprinted from the *Journal of the Bengal National Chamber of Commerce,* Sept., 1927. Econ. brochures for young India, no. 10. (Calcutta: Bengal National Chamber of Commerce. 1927. Pp. 27.)

Sombart, W. *Der moderne Kapitalismus.* Band I, *Die vorkapitalistische Wirtschaft,* 1 and 2. Band II, *Das europaische Wirtschaftsleben im Zeitalter des Fruhkapitalismus,* 1 and 2. Band III, *Das Wirtschaftsleben im Zeitalter des Hochkapitalismus,* 1 and 2. (München and Leipzig: Duncker & Humblot. 1928. Pp. xxiv, 462; ix, 463-919; xii, 585; xi, 589-1229; xxii, 514a; x, 517-1063. M. 75.)

Labor and Labor Organizations

NEW BOOKS

Baratier, P. *L'autonomie syndicale et ses limites devant les cours anglaises.* (Paris: Marcel Giard. 1928. Pp. 315. 40 fr.)

A short history of trade-unionism in England and of its legal rights; the legalization of the unions by the act of 1871; a comparison of the laws of France and the United States; the control of the funds of the unions; the strike of 1926 and its legality; the act of 1927.

Bimba, A. *History of the American working class.* (New York: International Pubs. 1927. Pp. viii, 360. $2.75.)

This book, written from the standpoint of the materialistic conception of history, contains some history and much propaganda. The author admits, quite frankly, that it is not an impartial survey of American labor history; that it openly takes side with the working class against the bourgeosie. Consequently, he sees an *employing class;* and it is wholly evil. The good deeds performed occasionally by the exploiters are but traps set to ensnare the working man.

The American working class is moving forward; but, "it is very backward today in comparison with the workers of other capitalist countries." The American state, federal and local, he believes, is largely responsible for this. It has been the tool of the ruling class. "The state legislatures under the capitalist system are composed of the representatives of the capitalist class. The police force is also an instrument of the bourgeois class to suppress the workers" (p. 151).

Another reason for the backwardness of the American labor movement is to be found in its conservative leadership. The "real mission" of the conservative leaders is to secure their own personal gain by deluding the workers in the interest of the ruling class. "The reactionary trade union

leaders are only bourgeois agents in the ranks of the workers" (p. 344). Instead of preaching the class struggle and working class solidarity, the American Federation of Labor teaches class collaboration. An example of this class collaboration, "whole-heartedly approved and supported by William Green and other leaders of the Federation," is the "shameful" Baltimore and Ohio Plan which makes the union an instrument for speeding up the workers to their own detriment. The result, says Mr. Bimba, has been a falling off in trade union membership. The International Association of Machinists had, in 1920, 330,800 paying members. In 1924, only 77,000 of them paid their dues (p. 346).

So-called "labor banks" are another example of conservative leadership. The union presidents are presidents of the banks; and this leads to an abuse of power.

The labor movement, in general, suffers because of the wide disparity in the aims and methods of the workers themselves. Skilled workers have little in common with the "lower" groups and cling to the craft form of organization rather than become industrialized. There are those who are willing to bargain with the employer; some would overthrow "the present system" altogether. Questions, which divide workers into unionists, socialists, communists, have worked against class solidarity.

Mr. Bimba thinks class solidarity will come, eventually; and society as a whole will be freed from the rule of capitalism. Meanwhile, the workers should adopt an aggressive policy, and be prepared to fight fire with fire.

The student of the labor movement will find this book an excellent example of current "radical" thought and teaching.

Frank B. Ward

Chafee, Z., Jr. *The inquiring mind.* (New York: Harcourt Brace. 1928. Pp. 276. $2.50.)

Reprints, for the most part, of essays on liberty and constitutional problems. Includes essays on the California I.W.W. injunction; criminal syndicalism in the Supreme Court; the Interchurch Steel report; company towns in the soft-coal fields, and strike injunctions.

Dunn, R. W. *Soviet trade unions.* Vanguard studies of Soviet Russia. (New York: Vanguard Press. 1928. Pp. 257. 50c.)

Feis, H. *Labor relations. A study made in the Procter & Gamble Company.* (New York: Adelphi. 1928. Pp. ix, 170. $2.)

Foster, W. Z. *Misleaders of labor.* (New York: Trade Union Educational League. 1927. Pp. 336. $1.75.)

The chapter titles of this book indicate the nature of its content and the underlying philosophy of the author. They are as follows: "A corrupted labor leadership," "Class collaboration," "Reactionary labor politics," "Bribery and betrayal in various industries," "Organized graft in the building trades," "Plundering the workers," "Trade union capitalism swindle," "Tainted labor journalism," "Autocratic control of the unions," "What must be done."

The volume is probably the most complete and detailed indictment of American trade unionism from the communist point of view which has yet appeared. It is clear evidence of the bitterness of the struggle between the ordinary American labor leaders and the communists; and it throws much light on the aggressive and determined opposition to Soviet Russia

which has found expression in A. F. of L. conventions since the end of the war.

Mr. Foster's denunciation of what he calls "the corrupt reactionary officialdom" in the trade unions is complete enough to delight the most extreme anti-unionists in the ranks of employers. Unfortunately too many of his lurid details are given without citations to sources. Though much of the material he presents is already well known, there is enough of the remainder which is neither well known nor supported by references to arouse doubt as to the character of the whole. It is quite clear, also, that Mr. Foster's treatment, colored as it is by his communistic philosophy, results in a book which grossly exaggerates the villainy of his opponents. According to him, the ordinary conservative trade union official is all black, an enthusiastic supporter of the *status quo,* a bureaucrat intent on retaining power at all costs, and a dishonest rascal willing to sell out the workers in order to pad his own pocket the more quickly. Bribery, slugging autocracy, crooked journalism, the non-partisan political policy, union management coöperation, labor banking, union labels, and craft unionism, are subject without discrimination to Mr. Foster's denunciation.

Despite its obvious shortcomings, this book will prove valuable to the student because it is such a complete statement of the position of present left wing unionism. Those who have been accustomed to associate union radicalism with the I.W.W. will find that the war and the Bolshevik Revolution have produced a movement of a very different kind.

EDWARD BERMAN

HOUGHTELING, L. *The income and standard of living of unskilled laborers in Chicago.* (Chicago: Univ. of Chicago Press. 1927. Pp. 224. $2.50.)

This inquiry, prosecuted in 1925 with the assistance of a committee from the local social agencies, the university, and certain employers, studied the total incomes and expenditures of 467 laborers (87 of them negroes) in 1924. The primary purpose was to find whether the standard budget of the social agencies provided a better living, for families supported by charity, than could be earned by an unskilled laborer in full employment; hence, only families were studied whose male head had worked most of the year, and who was responsible for at least one dependent child. Tabulated data and case reports are given here in great detail. A novel finding is that the estimate, made in the home, of the year's wages received, was lower than the employer's record for the same man, in 68 per cent of the cases. This result casts some doubt on all previous studies made of family earnings which are based only on estimates made in the home. The earnings of these men were mainly between $1,000 and $1,800 for the year; nearly 75 per cent of the negroes earned under $1,400, as compared with 51 per cent of the white workers. The median family contained three dependent children; maximum, nine. For each actual family the social agencies' standard budget was calculated, and it was found that in 69 per cent of the cases, the chief wage-earner's income alone was insufficient to supply this budget. When all income was considered, including that earned by the scrubbing, etc., of over 100 of the mothers, the funds of nearly 45 per cent of the families were still deficient. Analysis of food budgets and other expenditures, as well as reports on living quarters, are thought to show

that over half the families are living in unhealthy conditions; and that the standard budget is not excessively generous. Apparently, however, the social agencies are attempting to enable assisted families to live on a more expensive scale than can be earned by the families of 40 per cent or more of common laborers with dependent children.

Z. Clark Dickinson

Lees-Smith, H. B., editor. *The encyclopædia of the labour movement.* Vols. I-III. (London: Caxton Pub. Co. £3.)

MacInnes, T. *Oriental occupation of British Columbia.* (Vancouver: Sun Pub. Co. 1927. Pp. 170.)

A series of protests and suggested remedies of the problems arising from the fecundity and low standards of living of Orientals settled in British Columbia.

Montgomery, R. E. *Industrial relations in the Chicago building trades.* (Chicago: University of Chicago Press. 1927. Pp. xi, 340. $3.)

Mr. Montgomery has made a careful analysis of a problem which has aroused much public interest. The first part of his book deals with the organization and development of the Chicago Building Trades Council and of the building employers' associations. It describes the struggles between the two sides and the operation of collective bargaining in the industry up to 1921. Part 2 is devoted to an interesting treatment of such special problems as jurisdictional disputes, working rules and practices, monopolistic combinations, and graft. The final section is devoted to developments since 1921, especially the famous Landis award and its consequences. There is a good 14 page index.

The author finds that the following conditions are responsible for the peculiarly difficult problems generally characteristic of industrial relations in the building industry: (1) Intermarket competition is eliminated because buildings are a non-transportable commodity. As a result there is a greater inducement to enter into monopolistic combinations; and, since costs can be passed on, employers do not offer very active opposition to collective bargaining and the higher expenses of operation which often follow. (2) Quick action is a necessity in the industry. Once a contract is let, delay means heavier costs. As a result there is a greater inducement to obtain concessions by sudden strikes; and the dishonest business agent has an excellent opportunity to extort graft. This graft is often paid for what is called "strike insurance"; *i. e.*, the employer is promised that no strike will be called if the agent gets his money. (3) The fact that building is carried on under extreme specialization and subdivision of labor, and that new materials and tools are constantly being developed, leads to innumerable jurisdictional disputes. (4) The industry is highly seasonal. Many of the union working rules, so often considered by employers and the public to be restrictive and unnecessary, have been adopted as means of protecting the workers against unemployment. Excellent use is made of the foregoing analysis when Mr. Montgomery deals with the special problems and suggests possible solutions for them.

Up to 1900 there was no effective organization on the part of Chicago employers, but very powerful organization among the workers. The re-

sult was the development of such a train of union abuses that the contractors called a lockout. The consequent struggle resulted in the defeat of the unions. From 1901 to about 1911 there was collective bargaining under conditions of decentralization and disorganization on both sides. By the end of 1911 industrial relations were put upon a third basis, that of strong organization on both sides, a condition which, with some interruptions after 1921, has been characteristic of the industry ever since. The author finds, as might be expected, that strong two-sided organization is much better than decentralization of both sides or strong organization of only one.

This volume will be particularly welcome because of its discussion of the Landis award and its results. Here is an instance in which an arbitrator went far beyond the terms of arbitration and handed down a decision so unpalatable to labor, as well as to some employers, that it nearly wrecked the Building Trades Council, led to the formation of a so-called "Citizens Committee" which spent several millions of dollars in an attempt to compel acceptance of the award, and finally ended in an economic situation which was so advantageous to the workers that in a relatively short time after the award was granted employers were willingly paying workers wages higher than those they had received before the arbitrator had decreed a reduction.

Edward Berman

Perlman, S. *A theory of the labor movement.* (New York: Macmillan. 1928. Pp. xii, 321.)

Price, G. W. *Labor protection in Soviet Russia.* (New York: International Pubs. 1928. Pp. 128. $1.25.)

Schneider, D. M. *The Workers' (Communist) Party and American trade unions.* Johns Hopkins Univ. studies in hist. and pol. sci., series xlvi, no. 2. (Baltimore: Johns Hopkins Press. 1928. Pp. ix, 117.)

In his account of left-wing activities, and especially those of the communist Trade Union Educational League, the author has confined himself to a study of six unions, the machinists' union, the carpenters' union, the United Mine Workers, the Amalgamated Clothing Workers, the furriers' union, and the International Ladies' Garment Workers' Union. He describes the attacks of the radicals on the more conservative administrations of these unions, the factional warfare resulting from the communists' activities, and the almost complete defeat which they had suffered by 1927.

Mr. Schneider is often guilty of assuming that the opposition to the labor leaders in power is necessarily a communist opposition. A reader who comes to his book without previous knowledge of the problem is likely, for example, to gain the impression that the opponents of President Lewis of the United Mine Workers, such as John Brophy and Alexander Howat, are motivated primarily by communist ideas. The study suffers from the attempt to cover a complex subject in too small a volume. The result is a treatment which is too often superficially descriptive, and which is devoid of a thorough analysis of the fundamental problems of factionalism and radicalism in the trade unions.

Edward Berman

SCHWARTZ, G. L. *Output, employment, and wages in industry in the United Kingdom, 1924.* Memorandum no. 8. (London: Royal Economic Society. 1928. Pp. 14.)

SPERO, S. D. *The labor movement in a government industry. A study of employee organization in the postal service.* (New York: Macmillan. 1927. Pp. xii, 320. $1.50.)

Mr. Spero's book, which now appears in the "world today bookshelf," was originally published about 1924 in the "workers' bookshelf" under the auspices of the Workers' Education Bureau. After three chapters devoted to a general discussion of the character and status of unionism in the civil service, the author proceeds to a complete description of the development of unionism in the postal service.

His discussion of unionism in the civil service is devoted principally to an analysis of the differences between and the similarities of public and private employment. The conclusion of this analysis is that the civil service presents conditions and employee relationships so similar to those in private industry that the rights of the workers should be the same in both. This mean that, in the author's opinion, policemen are as much possessed of the right to strike as are ordinary workers. He denies the validity of the concept that employment in the civil service is in the nature of enlistment in the army or navy.

Having defended this position as a matter of principle, Mr. Spero devotes the remaining five-sixths of his volume to a description of all the important unions in the postal service, none of which has ever engaged in a real strike. The organized workers in this industry have been induced, both by public opinion and their own preferences, to refrain from the use of strikes, and to attempt to improve their conditions by seeking to "stand-in" with the authorities of the Post Office Department, or by attempting to exert influence upon Congress. The history of unionism in the service is largely the story of the rise and fall of unions stressing one method or another in their attempts to better working conditions. Mr. Spero's account is full of instances in which postal authorities have taken advantage of the employee's lack of effective industrial weapons. The gradual development of such unions as the National Federation of Post Office Clerks, the Railway Mail Association, and the National Association of Letter Carriers, their affiliation with the American Federation of Labor, and their consequent increased independence of the Post Office Department, have brought about greater economic strength and better working conditions for the postal employees.

EDWARD BERMAN

SPICER, R. S. *British engineering wages.* (New York: Longmans Green. 1928. Pp. 159. $4.)

American labor year book, 1928. Vol. IX. (New York: Rand School of Social Science. 1928. Pp. 288. $2.50.)

Economic brief in the noted case of Interborough Rapid Transit Company versus William Green, et al. (New York: Workers' Education Bureau of America, 476 W. 24th St. 1928. Pp. 492. $3.)

The economic status of the wage earner in New York and other states. (New York: National Industrial Conference Board. 1928. Pp. xi, 125. $2.50.)

Employee stock purchase plans in the United States. (New York: National Industrial Conference Board. 1928. Pp. xi, 245. $2.50.)

International Labour Conference, eleventh session, Geneva, 1928: report of the director. Part 2. (Geneva: International Labour Office. 1928. Pp. 194.)

Minimum wage fixing machinery: report and supplementary report. (Geneva: International Labour Office. 1928. Pp. vii, 149; 35.)

Rapport der Commissie van Onderzoek naar den Omvang en de Feitelijke Beteekenis der Werkloosheid te Amsterdam. (Amsterdam: Stadsdrukkerij. 1927. Pp. 109.)

Report of the Department of Labour, Dominion of Canada, for the fiscal year ending March 31, 1927. (Ottawa: H. M. Stationery Office. 1928. Pp. 164. 35c.)

Safety and production. An engineering and statistical study of the comparative relationships between industrial safety and production. A report by the American Engineering Council. (New York: Harper. 1928. Pp. 414. $5.)

A comprehensive study of the industrial accident problem with interesting data in regard to increased productivity in industrial plants. In stating the problem, the committee asserts that the generally accepted thesis that "the safe factory is the efficient factory, and the efficient factory in turn is the safe factory" is an "unproved thesis." The committee made an investigation of a score of the most important industries to determine the correlation between changes in production and changes in accident frequency and security rates. In this analysis, straight-line trends using the method of least squares were prepared. The study is illustrated with nearly 300 charts and many tables, compiling for the several industries, the number of employees, man-hours worked, production, accidents, days lost, and deaths. The report was made at the request of the National Bureau of Casualty and Surety Underwriters.

Wage rates, earnings, and fluctuation of employment: Ohio, 1914-1926 (inclusive). (Toledo: Information Bureau on Women's Work, 305 Commerce Guardian Bldg. Pp. 140.)

Money, Prices, Credit, and Banking

The Building and Loan Association. By Robert Riegel and J. Russell Doubman. (New York: Wiley. 1927. Pp. viii, 320. $3.00.)

The authors, professors at the Wharton School of Finance and Commerce, University of Pennsylvania, have set out carefully the bookkeeping procedure now used by many building and loan associations which operate on the serial plan (chapter 8 and 9), and have well stated the proper methods of auditing procedure and the need for careful, trained and disinterested auditing. They have also examined recent laws and one or two recent federal tax decisions, and have presented some of the points about state taxation both in the way of license fees and other taxes. These are new contributions to

the field. In most other respects the book is merely a re-statement of existing material—in some cases, unfortunately, a re-statement of former errors.

The authors evidently laid out the book as a discussion of the serial plan of operation; and if they had stuck to this part of the task the result would have been very satisfactory. Their discussion of serial operations as now practised in Philadelphia, is well handled. This is true even though the 3,000 or more associations in Philadelphia use several different methods of operation and the serial associations in other states differ rather sharply from the Philadelphia practice. No other recent book has confined itself to the serial plan; and, as a consequence, a book dealing solely with this portion of the business would have been of great service. More associations in the United States use the serial plan than any other one plan, and not less than one-third of the assets of all associations are handled by this system of bookkeeping. For, after all, the differences between various plans of operation of building and loan associations lie in the matter of bookkeeping rather than in anything else. Fundamentally, all building and loan associations are alike. They lend primarily upon first mortgages on real estate, principally upon homes; and each has some method whereby the loan is paid off in monthly installments. The serial plan is one of several important plans whereby the monthly installments of borrowers and savers can be properly accounted for and in which profits can be allotted.

Apparently in an attempt to appeal to a wider audience, the authors have introduced reference to other plans of operation, but by their statements they show a lack of familiarity with that portion of the building and loan business. They have read the state laws, but have failed to analyze the business. The diversity of state laws about various portions of the business appeal to them as "ludicrous," when this very diversity shows the "intelligent groping" which has taken place in years past, when no collected information was available either to legislators or building and loan officials.

Without understanding plans of operation other than the serial plan, they offer criticisms of which this, directed against the "permanent" plan (p. 7), is typical: "It involves an exorbitant amount of detail in comparison with the slight benefit obtained. . . . . It requires far greater labor by the treasurer and secretary who have innumerable series to account for separately." The truth of the matter is that the other plans, by omitting series, enable the accountants to group the entire business by fiscal periods, just as in most other financial institutions, thus relieving themselves of the necessity for determining the value of groups of series, and releasing many hours of labor which

can be applied to the keeping of separate ledger accounts for the individual members and to general business development. The advantages of knowing at a glance in some other "plans" just how much each investor has to his credit or how much a borrower would owe upon his loan, may very well offset the trouble of keeping such accounts.

The authors have confused the idea of "deposits" (p. 31) which set up a debtor and creditor relationship, with the "deposit shares" and other optional payment shares used under the so-called "Dayton" plan of operation. Payments accepted by mutual associations are invariably credited to the purchase of shares in the association and are not borrowed money, returnable on demand or on 30 days' notice as in the case of ordinary deposits in the banking world. This is true whether the association operates on the Dayton plan or on any other plan. There can be no reasonable excuse for the statement that "where there is no authorizing statute, legal opinion seems to be that such deposits are borrowed money and depositors are creditors of the association." Optional payments made on the Dayton plan are not "deposits" and cannot be so classified.

Genuine deposits are permitted in certain states, provided the company is organized with a paid-in capital which assumes the same liability that attaches to bank stock. The word "deposit" in this true sense is used only in Ohio, and even here only a portion of the associations have adopted the practice. In other states where money is borrowed from the public for the regular purposes of the associations using paid-in capital (called guarantee capital), it is customary for this investment to take the form of "investment certificates." These have many of the characteristics of bank certificates of deposit, and the same type of reserves and other safeguards. The present authors have overlooked this distinction.

It is somewhat surprising to see the "dollar month" formula for interest computation (p. 130) repeated 18 months after it has been discarded by its original proponents in favor of the more scientific tables prepared by the Institute Publishing Company. The dollar month method always gives a result less than the actual rate as Messrs. Riegel and Doubman have noted. Finding the rate by the use of the new tables is so much simpler and more accurate that there is no excuse for not using them instead of the clumsier arithmetical computation.

One of the most constructive statements in the book is contained in a footnote on page 83, regarding borrowing by an association. It is worthy of being quoted in full:

It would seem that the two bases of an association's borrowing capacity in the economic sense are (1) its assets and (2) its prospective income. The first is . . . . net assets and not gross assets. The second is likely to be overestimated and therefore a convenient restriction would seem to be a percentage of present income. There should, therefore, be a dual restriction in the form of a maximum percentage of net assets and a maxium percentage of the income. To base the borrowing capacity upon a percentage of the withdrawal value of the shares is unscientific, because by increasing the capital the borrowing capacity may be increased, although there is no necessary connection between the two. To base the restriction upon the mortgage loans is also obviously illogical as it makes money loaned more important for security than cash in the bank.

Association officials have been in the habit of guessing about the probable limits of their borrowing capacity and these suggestions will probably be taken into consideration in future analyses of the subject.

These authors have a good word to say for the use of second mortgages in a limited amount where the loan is paid out on the installment plan (pp. 105-107). The successful experience with second mortgages in Philadelphia justifies this statement and earlier writers should have called attention to their use in a limited field.

The problem lies solely in connection with the second mortgages where the first is held by a different lender, however, and not where the association holds both. No question of their use has ever been made when the association holds a first mortgage on the same property. Second mortgages made after firsts by the same company are commonly required because of failure of the borrower to estimate his entire needs (as in a construction loan) and the like failure of association officials to check the amount asked for with the amount required.

This failure on the part of the association officials may be caused by a desire to avoid work or trouble. In fact, it may be caused by the same notion which leads the present authors to say that building and loan associations are "unsuited" to make construction loans "because of the detail involved" (p. 266). If a business is worthy of the time devoted to it, there can be no more satisfactory service to the borrower and to the community than that expended by the officials of a building and loan association in assisting their members to acquire good homes. And since the average borrower buys but a single home in a lifetime, it is reasonable to believe that he will get more for his money with expert advice, than without it.

Messrs. Riegel and Doubman have done a commendable piece of work for the serial associations of Pennsylvania. Their next edition will be materially strengthened if they omit the paragraphs about practices in other states, and in their place substitute a careful analysis

of other practices in Pennsylvania, notably in Harrisburg and Pittsburgh, about which there appears to be no mention in the present volume.

HORACE F. CLARK

American Savings, Building and Loan Institute,
Kansas City, Missouri

Banking Theories in the United States before 1860. By HARRY E. MILLER. (Cambridge: Harvard Univ. Press. 1927. Pp. xi, 240. $2.50.)

For those students of banking who still think the subject has a more vital and abiding content than the latest news of what the banks did this forenoon and are likely to do the day after tomorrow, this book will prove a welcome addition to the literature of the subject. It deals with banking theories evolved or espoused in the United States prior to 1860. While gratefully acknowledging the service Professor Miller has rendered, one must say that the temptation which so often besets the reviewer to criticize the book the author did not write rather than the one he did, is in this case especially strong. The author's concern has been to ascertain "what was known about this or that" theory concerning banks. The study, therefore, "is decidedly not one of men," nor is it a criticism of the theories set forth, though helpful appraisal is here and there given, nor of the banking practice or economic conditions which gave occasion for theorizing. There is no intimation of the relation between the theories held and bank legislation; nor is it the purpose to trace the evolution of banking theory, though the chronological method of treatment indicates in a general way certain lines of development. What we have is, therefore, a handbook of banking theories rather than an essay.

And a very excellent handbook, be it said. Dr. Miller has shown great industry in discovering the opinions of a wide range of writers on various specific banking questions and has displayed great skill in analyzing and classifying them. The first group of chapters, dealing with the utility of banks as a source of media of payment, passes in review, usually in chronological order, the opinions of various writers from colonial times to 1860 on the functions of banks, the effect they have, if any, on the increase of the capital of the country, on the specie supply, on price fluctuations and on the elasticity of the currency. These are followed by a helpful chapter (10) summarizing and to some extent criticizing the views set forth over this long period.

Another group of chapters deals by the same method with the nature of deposits and note issues; and the volume closes with a similar treatment of banking policy, especially as to short-time loans, the payment of interest on deposits, the discount rate, and centralization of control

over reserves. The theories set forth in these chapters deal with these banking policies largely from the point of view of their effect on "crises" and the "business cycle." There is a final chapter on "suggestions for moderating the cycle;" for, though the modern names for these phenomena were not invented by antebellum writers, they understood their nature. Professor Miller says, "At the hands of a few writers this doctrine of the mutual reaction upon each other of bank credit, trade, and prices, was so stated as to trace commercial crises primarily to the banking system, while still giving its due to the objection that banks are governed in their operations by the state of business activity. The result was a fairly complete general theory of self-generating cycles. Condy Raguet, whose writings deserve far more attention than they have received, seems to have been the first to formulate the theory."

While many of the theories set forth are crude in the light of present-day banking theory, and the generally recognized utility of banks, the net effect of the perusal of the book is to inspire respect for the men who were trying to evaluate the new institutions that were thrusting themselves into the economic life of the time, often dominating it in grotesque fashion. One feels on the whole that the theories of the time were rather superior to the practices.

The book will be indispensable to those teachers of banking theory whose approach is historical; and the various shades of opinion upon the carefully defined issues presented by Dr. Miller will serve a useful purpose for the less historically-minded who use imperfectly stated or false doctrines as a means of setting forth in clearer light the true doctrine they themselves hold.

University of Nebraska G. O. Virtue

Financing an Empire: Banking in California. By Ira B. Cross. Vols. I-IV. (Chicago: S. J. Clark. 1927. Pp. xii, 526; 527-1002; 531; 448. $40.00.)

As its subtitle suggests, this study is a history of banking in California. The work is encyclopaedic in scope, presenting not only a general review of the emergence of monetary problems but also a detailed account of the development of individual banking institutions, from the gold rush of 1849 to the close of 1926. Of the four volumes, only the first two were written by Professor Cross. In this panorama of seventy-five years' development, the author presents an extraordinary amount of data concerning the period of private banking, the movement for incorporated financial institutions, the coming of the federal reserve system, the appearance of labor banks, and the spread of branch banking.

Although the major portion of the study is devoted to the development of banking institutions, by far the most intriguingly interesting chapters are those that survey the rise of monetary problems and the individualistic policy of the state with regard to the issuance and acceptance of paper money. It was not until about 1846 that coins appeared as a medium of exchange in the economic life of California. Prior to that time barter prevailed. Tallow, hide, horses, and cattle were the common media during the long period in which the missions were the centers of trade. When, by the treaty of Guadalupe Hidalgo, February 2, 1848, California became a part of the United States, the monetary system began to assume a more mature form. In the gold rush of '49 gold dust dominated all channels of finance. Merchants' stores and coöperative associations became depositories of the precious metal. The decade of the fifties witnessed the wide circulation of gold dust, gold nuggets, privately issued gold coins, and depreciated foreign coins as media of exchange. Greater uniformity followed the establishment of a branch of the mint in San Francisco in 1854.

California has been traditionally a "hard money" state, and its persistent refusal to accept paper money is the theme of much of the author's discussion. The reasons for this peculiar attitude on the part of California are not difficult to find. First, there is the fact that the state was able to produce more than enough gold to satisfy the needs of its own people for a circulating medium. Had this not been the case, doubtless the depreciated bank notes of eastern states would have been acceptable. There is, however, the additional fact that the men who framed the first constitution had unfortunate and intimate contacts with the wildcat bank notes of eastern states. Therefore, they wisely incorporated in the constitution of their own state the provision that prohibited the issuance and circulation of any kind of paper money. Even the emergency of the Civil War could not change this attitude; consequently the United States notes were rejected, and those citizens who used them were publicly denounced. National bank notes received no better welcome.

It remained for the exigencies of the World War to dispel California's obsession against paper money. The request of the United States government for coöperation with the Federal Reserve Board and federal reserve banks in concentrating the gold supply during the emergency of the war led to the acceptance of paper money in this state. Federal reserve notes and federal reserve bank notes appeared, and state taxes could now be paid in these media instead of "gold coins of standard weight and finess." The "hard money" complex was apparently destroyed. When, a few years after the war, the Secretary of the Treas-

ury authorized the release of gold coins for circulation in California, the people of this state manifested little or no interest in the matter. The convenience of paper money had been demonstrated and its circulation was demanded.

Justification of California's adherence to a "hard money" policy is found in its influence upon the development of mining resources and its discouragement of inflation. Gold doubtless stimulated trade and prevented total collapse of the monetary structure. "By adhering to the policy of specie payments," says the author, "California more than justified the economic wisdom of its citizens, its legislators, and its financiers, as well as that of the founders of its government" (p. 361).

This study represents many years of careful, systematic research to which Professor Cross has brought untiring energy and unusual analytical insight. The net result is a complete and interesting history of money and banking that greatly enriches the literature of this field. Special students would do well to emulate this achievement and give us similar historical studies for other states.

Gordon S. Watkins

University of California at Los Angeles

NEW BOOKS

Anderson, B. M. *An analysis of the money market.* Chase Econ. Bull., vol. VIII, no. 1. (New York: Chase National Bank of the City of N.Y. 1928. Pp. 29.)

Arndt, E. H. D. *Banking and currency development in South Africa, 1652-1927, with an appendix on the rise of savings banking in South Africa.* (Cape Town and Johannesburg: Juta & Co. 1928. Pp. xvi, 542. 25 sh.)

Bodfish, H. M. *Historical balance sheet analysis of Ohio building and loan associations.* Spec. Bull. of the Bureau of Bus. Research. (Columbus: Ohio State Univ. 1928. Pp. 35, mimeographed.)

Burns, A. R. *Money and monetary policies in early times.* History of civilization series. (London Kegan Paul. 1927. Pp. 478.)

This book is a detailed study of the first thousand years of coinage history and of the motives which dominated the monetary policies of that period. Beginning with the early use of certain intrinsically valuable commodities as measures of value, the author painstakingly traces the rise of the precious metals, passing by weight, as media of exchange as well as measures of value, the beginnings of coinage in the Ægean Sea about the beginning of the seventh century, B.C., and the subsequent developments through the monetary reforms of Constantine, in the early fourth century, A.D. Like other writers on the subject, he attributes the first coins, crude and variable and passing by weight rather than by tale, to the King of Lydia; but he looks upon their issue as only one step in a long line of evolution.

The further elements in that development he presents in detailed studies of the materials, fineness, and weight standards of these early

coins, the inscriptions appearing upon them, and the later appearance of token money and small change coins. He traces carefully the shift of the right of coinage from private individuals to states, and from the people in the democracies to the emperors and tyrants in the autocracies. He sees several motives in early coinage policy, including the desire to dispose of state-owned supplies of the precious metals, but he stresses the absence, in the early centuries of coinage, of the profit motive, operating through debasement and intentional depreciation. Though its possibilities became apparent very early, not until the latter days of the Roman Republic and the early days of the Empire were they exploited. Then it was for the first time that monetary policy was dominated by this motive.

Short summaries at the end of each chapter present the conclusions of that chapter, while a general summary gathers the various threads into a unified presentation. The footnotes and bibliography reveal an occasional reference to original sources, but a much greater reliance upon secondary sources. It is somewhat unfortunate that, outside of a very few uncritical references to the Scriptures, no use is made of the Hebrew source material. While it is probably true that the Hebrews contributed little original to the development of money, they were in contact with practically all of the peoples considered in the book. Consequently, the Talmud contains frequent references, which should prove valuable, to the monetary systems of these various peoples, while its contributions to early theory might have added somewhat to the rather slim appendix on that subject.

JOSEPH J. SENTURIA

DEMARIA, G. *Le teorie monetarie e il ritorno all'oro.* (Turin: Fratelli Bocca, 3 Via Carlo Alberto. 1928. Pp. xiii, 245. L. 30.)

EYNERN, G. VON. *Die Reichsbank: Probleme des deutschen Zentralnoteninstituts in geschichtlicher Darstellung.* (Jena: Fischer. 1928. Pp. x, 144. Rmk. 8.)

FLEMING, W. L. *The freedmen's savings bank. A chapter in the economic history of the negro race.* (Chapel Hill: Univ. of N. C. Press. 1927. Pp. x, 170. $2.)

"The organization in 1865 of the Freedmen's Bank system was one of the few sensible attempts made at the close of the Civil War to assist the ex-slaves" in habits of thrift and economy. "The purpose of this account is to outline the history of the organization, to describe its possibilities, its development, its decline and collapse, and to show how it influenced the negro."

Although intended originally to be operated only in the City of Washington, the Freedmen's Saving and Trust Company soon established branches throughout the South. The negroes were encouraged to believe "that the bank was a part of the Freedmen's Bureau system" with "its solvency and safety guaranteed by the United States." Within a few years the number of depositors reached a total of 72,000 who were scattered all over the South; and, in 1874, when the bank closed its doors, the total deposits were $57,000,000.00.

In the charter there were "no penal clauses to bind the officials, and nothing definite was provided in regard to their bonds." Too rapid expansion, expensive branches, corrupt and inefficient officials, poorly

kept accounts, political intrigues, bad loans, a shrinkage of real estate values, an excessive rate of interest paid on deposits, and similar factors contributed to the collapse of the system. The author sketches in fine detail the final dark chapter of "the careless and corrupt use of its funds by the 'ring' of District of Columbia trustees and officials" and its exit under the Commissioners and the Comptroller of Currency. Thus ended in failure this interesting political and economic experiment with a backward people, leaving in its wake discouragement of habits of thrift and a certain bitterness towards a government which the negroes supposed to be false to its promises. "The Freedmen's Bank had a fine field and according to expert opinion could have survived all other troubles had it not been for the lack of honesty on the part of those who for a time controlled its management at Washington."

N. N. Puckett

Frayssinet, P. *La politique monétaire de la France, 1924-1928.* (Paris: Recueil Sirey. 1928. Pp. ix, 307.)

Furuya, S. Y. *Japan's foreign exchange and her balance of international payments, with special reference to recent theories of foreign exchange.* Studies in hist., econ. and public law, no. 299. (New York: Columbia Univ. Press. Pp. 208. $3.85.)

Gutmann, F. *Währungsideen und Währungsgestaltung in der Gegenwart.* (Jena: Fischer. 1928. Pp. 29. Rmk. 1.10.)

On the importance of the relation of the supply of gold and credit to prices, and on the necessity of stabilizing the latter.

Hahn, L. A. *Aufgaben und Grenzen der Währungspolitik: eine Kritik der deutschen Währungspolitik seit der Stabilisierung.* (Jena: Fischer. Pp. 61. Rmk. 2.)

Helfferich, K. *Money.* Translated by Louis Infield. Edited by T. E. Gregory. Vols. I and II. (New York: Adelphi. 1927. Pp. xiv, 340; 341-660.)

The German edition of this work was reviewed in these columns by Eugene Schwiedland in March, 1925 (vol. xv, no. 1, pp. 136-137). Only a few comments relative to the translation are therefore justified.

The translation has been based upon the sixth and last (1923) revised edition, which has been carefully followed with the exception of three chapters on the legal aspects of money which have been omitted. Mr. Louis Infield, to whom the difficult task of translating Helfferich's monumental work was intrusted, has given us a most excellent rendition into the English language.

Dr. T. E. Gregory has added a valuable appendix of four parts which brings down to March, 1927, the story of the efforts of the European countries to recover from the effects of inflation. His contribution of twenty-five pages is concerned with the re-introduction of the gold standard, problems of transition, the nature of the post-war gold standard, and the production and consumption of the precious metals.

Students of monetary science owe the editor and the translator a real debt of gratitude for having made Helfferich's important work more easily accessible.

I. B. C.

HOLTROP, M. W. *De omloopssnelheid van het geld.* (Amsterdam: H. J. Paris. 1928. Pp. 215.)

This book on the circuit velocity of money begins with an outline of the history of this concept from the time of the first clear presentation of its economic implications by Sir William Petty in 1664 and shows the development of the different forms the theory has taken at different times down to the present. The author develops the idea that the velocity of circulation is determined by the intensiveness with which wealth is used through the industrial and financial organization of our economic society; he treats of the causes and consequences of changes in velocity of circulation and the differences in velocity due to seasonal and conjunctural changes, inflation and deflation, and to improvements in banking and credit systems. The book closes with a six-page bibliography.

R. S. SABY

KISCH, C. H. and ELKIN, W. A. *The constitutions of banks of issue, with an analysis of representative charters.* (London: Macmillan. 1928. Pp. 395.)

LACHAPELLE, G. *Les batailles du franc. La trésorerie, le change et la monnaie depuis 1914.* (Paris: Félix Alcan. 1928. Pp. 260.)

LEMONTRÉER, G. *La rationalisation des banques en allemagne.* (Paris: Librairie Dalloz. 1928.)

MABIT, J. *La restauration monétaire et les bilans.* (Paris: Hachette. 1928.)

MISES, L. *Geldwertstabilisierung und Konjunkturpolitik.* (Jena: Fischer. Pp. iv, 84. Rmk. 4.)

NUSSBAUM, A. *Verträglicher Schutz gegen Schwankungen des Geldwertes.* (Berlin: Walter de Gruyter. 1928. Pp. 95.)

SCHACHT, H. *The stabilization of the mark.* (New York: Adelphi. 1927. Pp. 247.)

Although a good deal has been written about the stabilization of the mark, the difficulties involved and the mechanism employed were not clear until the publication of Dr. Schacht's book. The author traces the causes of the inflation during and after the war, and subjects the policy of the Reichsbank as well as of the German government, to severe criticism. The first three chapters dealing with the depreciation of the mark, reveal little new material; for the causes of the depreciation of the mark have been generally known. Dr. Schacht's emphatic denial that the collapse of the mark was not entirely due to the German government but rather to the acts of the Allies in exacting impossible reparation payments and especially to the occupation of the Ruhr, has also been a generally accepted fact. The interesting and most valuable part of Dr. Schacht's study begins with the part dealing with Dr. Schacht's appointment as currency commissioner of the Reich. From this point on, the stabilization of the mark, the reorganization of the currency and of the money market became the personal work of the author.

The first act of Dr. Schacht in his endeavor to stabilize the currency was to curtail speculation in foreign exchange by reducing the amount of notes in circulation. This was obtained by curtailing credit of the Reichsbank for purchases of exchange and by forcing the various com-

panies, municipalities, and other public bodies which had issued emergency currency to redeem it. The restriction of credit and the reduction of notes in circulation not only made it impossible for German speculators to borrow marks from the Reichsbank with which to purchase foreign exchange, but also placed a considerable quantity of foreign exchange bills which hitherto was hoarded in the hands of the Reichsbank. Once domestic speculation in marks was checked, the mark remained stable at one trillion paper marks to one gold mark. The establishment of the Rentenbank and the issuance of Rentenmark further aided in the temporary stabiliziation of the exchange. In February and March, however, the Rentenmark began to depreciate and new measures were necessary to protect it. This Dr. Schacht obtained through rigid rationing of Central Bank credit which had the following results: in the first place, it led to the liquidation of foreign exchange bills held by banks and merchants; and secondly, it led to a liquidation of commodities, decrease in commodity prices, and to an improvement of the balance of payment.

The Reichsbank and Dr. Schacht in particular have been severely criticized for this credit policy. The critics asserted that a central bank is in a position to regulate credit through its discount policy and that an increase in the discount rate would have had the same effect on the money market without causing so much hardship. In replying to these critics, Dr. Schacht points out that with open market rates ranging from 40-100 per cent an increase in the discount rate would have had no effect except to increase further the cost of credit. Although credit rationing is a measure to be adopted only in extreme cases, it produced the desired effect and assured the stability of the mark.

Chapter 6 discusses the disastrous effects of currency inflation. The last few chapters deal with the reconstruction of the German money in capital markets. The most interesting part is that dealing with the effect of foreign borrowing on the currency and on the Reichsbank and the relation between foreign borrowing and reparations in cash. The argument of Dr. Schacht that foreign loans cannot be regulated as an economic surplus of production over consumption and therefore cannot be used for payments in cash reparation account did not find the attention it merits, because the priority question at present overshadows all other problems arising out of the reparations question.

Dr. Schacht's book gives a clear account of the currency development in Germany. Its main defect is that it contains too much personal color and represents in part an apology or explanation of the policy of the Reichsbank under his direction. On the whole, the book by Dr. Schacht is one of the most interesting economic descriptions that appeared after the war and in many parts brings out points which hitherto have not been stressed sufficiently.

M. Nadler

Sinz, J. *Die Sanierung Ungarns.* (Berlin: Walter de Gruyter. 1928. Pp. 85.)

Stabilization of the *valuta* and establishment of the budget on a sound basis in Hungary.

Westerfield, R. B. *Banking principles and practice.* Rev. ed. (New York: Ronald. 1928. Pp. 859. $4.50.)

Widmer, R. *La question monétaire en Belgique depuis la fin de la guerre.* (Paris: Presses Universitaires de France. 1928. Pp. 404.)

La cassa di risparmio di Torino nel suo primo centenario, 4 luglio, 1827-4 luglio, 1927. (Torino: Tip. Eredi Botta. 1927. Pp. xlviii, 630.)

Italian savings banks have the noble tradition of celebrating special epochs of their lives by the issue of volumes which deal not only with the internal action and organization of the banks themselves but also with the general economic history of the country. Hence we have many precious regional histories which we owe to savings banks. A particular instance is the magnificent series of eight volumes issued by the Monte dei Paschi, the famous bank established at Siena in 1586 by the Medici; also the histories issued by the savings banks of Milan, Padua and Verona. Now, for the centenary of the Bank of Turin, we have a handsome volume relating to the important economic history of the Piedmont.

The volume begins with an enthusiastic and eloquent preface by Alberto Geisser, the chairman of the Savings Bank, on the economic changes of the last decades. It is followed by an essay by Professor Giuseppe Prato on saving and credit in the Piedmont at the beginning of the modern era. Professor Prato deals with the formation of the saving spirit in the early days of capitalism, with the first institutions for thrift and saving in the Piedmont, and with the proletarian class of that region during the last century. The most interesting chapter of Professor Prato's contributions is perhaps the long analysis of the gradual formation of credit institutions in the Piedmont during the first half of the nineteenth century up to the creation of a bank of issue. This section is a valuable sequel to the well known book by the same author on *Monetary and Credit Problems in Piedmont during the Seventeenth and Eighteenth Centuries* (Turin, 1916).

The second half of the volume is devoted to a large and detailed history of the Turin Savings Bank during the hundred years, 1827-1927, traced by Giulio Fenoglio.

Riccardo Bachi

The cost of living in twelve industrial cities. (New York: National Industrial Conference Board. 1928. Pp. x, 76. $1.50.)

Data were obtained by personal investigation in: (1) four large cities—Boston, Cleveland, New York and Philadelphia; (2) four medium size cities—Dayton, Ohio, Reading, Pennsylvania, Springfield, Massachusetts, and Syracuse, New York; (3) four small cities—Butler, Pennsylvania, Leominster, Massachusetts, Lockport, New York, Marion, Ohio.

The data relate to cost of food, housing, fuel and light, clothing, and sundries. It is estimated that the average minimum cost of maintaining a "fair American standard of living" for the family of an industrial worker, his wife and two children ranges from $1,552 in Cleveland to $1,628 in New York for the large cities; from $1,504 in Dayton to $1,618 in Reading for the medium size cities, and from $1,442 in Marion to $1,567 in Lockport for the small cities. It thus appears that the difference in cost of living in different cities is not great.

Russian gold. (New York: Amtorg Trading Corp. 1928. Pp. 72.)
A collection of articles, newspaper editorials and reports, and statistical data regarding the Russian gold reserve and shipments of soviet gold.

School savings banking during school year of 1926-1927. Eighth annual report on systems throughout the United States with honor roll and comparative statistics. (New York: American Bankers' Assoc. 1928. Pp. 28. 25c.)

Public Finance, Taxation, and Tariff

The Tariff: An Interpretation of a Bewildering Problem. By George Crompton. (New York: Macmillan. 1927. Pp. ix, 226. $2.50.)

Mr. Crompton's point of departure in this interesting study of the tariff question is the revival of protectionism in recent times. How is the vitality of a policy that has so long withstood the logic of the professional economists to be explained? In part, thinks Mr. Crompton, as the expression of continued growth of nationalism, and to a less degree by the reaction against the teachings of the classical school from which the doctrine of free trade comes.

Since Mr. Crompton is a protectionist, the short cut to the solution of the problem he has set would be to show directly the inherent soundness of protectionism. He does not pursue this course directly but proceeds first to examine the soundness of the free trade argument. This is done point by point with great candor under the caption "Free trade fallacies." The most remarkable thing about the chapter is the fact that the author finds so little in the free trade argument he wishes to discard. The fallacies he discovers are mostly those of over-statement. For example, the cost of protection is high but not so high as claimed; while the tariff is a burden to agriculture it is not so great a burden as is supposed—that industry does enjoy some gain from the home-market and from the progress of invention, hastened by the protective system; the doctrine of comparative cost is reduced to nothingness by the array of authorities cited against it and yet that doctrine "undoubtedly with the necessary qualifications is substantially correct,"—and at the end of the volume he concludes that "though relying on unsound premises and often supported by false arguments and applied with unwarrantable recklessness to nations of every possible cultural stage, and though sometimes stated in such simplified form as to be absurd, the doctrine of free trade is fundamentally sound."

It is in strengthening the young industries argument as a basis for protection that Mr. Crompton's most distinctive service is rendered. The great error of the free traders and, he might have added, of the protectionists too, has been the over-emphasis of the mobility of labor, capital and managing ability, and an under-emphasis of the time re-

quired for the shift of investment. The classical writers have assumed that a slight advantage in profits is enough to bring about the shift. Mr. Crompton might have pointed out that this defect of classical reasoning shows itself in other fields than the tariff controversy; how uncertainly, for example, market value is adjusted to normal value, and how wide apart are the rates of return in different industries, under such "perfect competition" as exists in modern industry. The fact that the forces which bring about shifts in investment, especially into new industries, work slowly and unevenly Mr. Crompton amplifies in his historical discussion of the dissemination of the industrial arts, the course of industrial development, industrial secrecy and the difficulties to be met in establishing manufactures. The lesson of history is that time is a more important factor than has been supposed. We must think of the infancy of industries, not in terms of years or even decades, but of generations. It took three hundred years, for example, for the English to establish the woolen industry. It is with this truth, apparently, that Mr. Crompton resolves the perplexities of the tariff question. But one wonders whether the wealth of illustration and purposeful argument used to strengthen this one sound economic argument for protection by thus lengthening the period of industrial infancy may not as a matter of fact weaken it. We cannot commend too highly the sincerity and candor with which the book is written; but one closes the volume with the feeling that the tariff remains a bewildering problem.

G. O. Virtue

University of Nebraska

New Books

Donne, O. D. *European tariff policies since the World War.* (New York: Adelphi. 1928. Pp. xiv, 288. $3.50.)

Fairchild, F. R. *Progress report of the forest taxation inquiry.* (Washington: Supt. Docs. 1928. Pp. 8, mimeographed.)

Friedrich, J. *Das internationale Schuldenproblem.* Probleme des Geld und Finanzwesens, Band VII. (Leipzig: Akademische Verlagsgesellschaft. 1928. Pp. xii, 352.)

Guest, H. W. *Public expenditure: the present ills and the proposed remedies.* (New York: Putnam. 1927. Pp. xiv, 217. $1.75.)

A fair comment on this work is that the text is hardly adequate to the title. It might better have been styled *Some Social Psychological Aspects of Public Expenditure.* After a brief discussion of the rapid increase of public expenditure, the author places the burden of his argument on the behavior of the voter and of legislative groups, concluding with a brief treatment of standards of expenditure and methods of control.

With the general premise that public expenditure rests on a social-psychological basis, there can be little quarrel, but the emphasis placed on habit seems overstated. For instance, the assertion that "from the psychological point of view there is ever a tendency in public expenditures

toward the realization of a static state," may fairly be questioned. Again, the statement that "voters tend to be moved to admiration of an upper or wealthy class and to support the measures favored by those classes," while containing a modicum of truth, will hardly bear the test of modern political experience. Likewise the statement that "the part played by the voter in . . . . public expenditure is insignificant as compared with that of legislative groups" seems to give too little recognition to the great increase in the expenditures by communities where the town meeting still prevails. One could wish that the author had relied less on *a priori* reasoning and, instead, had applied the inductive method to types of legislative bodies—say the town meeting, the boards of a large city, and the national congress.

The final chapter, on methods of control, is disappointing. The recommendations for a budget, an independent audit, limitation of debt totals, and centralization of purchasing authority are hardly new. When it comes to social-psychological factors to which the reader is led to look for corrective changes, the book offers little more definite than that "only by changing the wills and wants of man can there be any thorough-going change in either individual or public expenditures." He finds, moreover, that the problem is not one of education alone, but that it will "remain largely unsolved until a definite eugenic program is put into action."

Luther Conant, Jr.

Haensel, P. *Die Finanz- und Steuerverfassung der Union der Sozialistischen Sowjet-Republiken.* Heft 10. (Jena: Fischer. Rmk. 18.)

Lippert, G. *Handbuch des internationalen Finanzrechtes.* 2nd rev. ed. (Vienna: Osterreicheschen Staatsdruckerei. Pp. liv, 1276. S. 88.15.)

Lusensky, E. *Die Luxusumsatzsteuer in Deutschland.* Heft 3. (Jena: Fischer. Rm. 3.50.)

Murray, A. and Carter, R. N. *Guide to income-tax practice.* 11th ed. (London: Gee & Co. 1927. Pp. liv, 544. 30s.)

Nitti, F. *Principes de science des finances.* Vols. I and II. (Paris: Marcel Giard. 1928. Pp. xix, 439, 470. 100fr.)

Pfitzner, J. *Deutschlands Auslansanleihen.* (Berlin: Carl Heymann. 1928. Pp. iii, 174.)

Pigou, A. C. *A study in public finance.* (New York and London: Macmillan. 1928. Pp. xvii, 323.)

Poincaré, R. *L'oeuvre financière et économique du gouvernement.* Discours prononcé à la Chambre des Députés les 3 et 4 février, 1928. (Paris: Berger-Levrault. 1928. Pp. 216.)

Walton, V. *Income-tax, super-tax, and surtax. The new law explained.* (London: Pitman. 1928. Pp. xviii, 220. 7s. 6d.)

Wright, P. G. *The tariff on animal and vegetable oils.* (New York: Macmillan. Pp. xviii, 347. $2.50.)

The fiscal problem in New York State. (New York: National Industrial Conference Board. 1928. Pp. xx, 275. $3.)

The study is based on official data. It deals with expenditures, the tax system, tax collections, the social and economic distribution of the tax burden, problems of the general property tax, corporation tax, inheritance tax, highway revenue, and possible sources of additional tax revenue. Statistics are brought down to date.

Fiscal problems of the states. (Washington: Chamber of Commerce of the U. S. 1928. Pp. 47.)

Das Gesetz über die direkten Steuern (Zakon o reprosrednim porezima). Verlaubart im Amtsblatt "Sluzbene Novine" vom 8 Februar, 1928, no. 29, VII, Gesetzblatt 51. Ubersetzt ins Deutsche. (Belgrad: G. Kohn. 1928. Pp. 118.)

International Labour Conference, eleventh session, Geneva, 1928: report of the director. Part I. (Geneva: International Labour Office. 1928. Pp. iii, 273.)

Nebraska taxpayers' handbook. Bull. no. 15. (Lincoln: Legislative Reference Bureau. 1928. Pp. 46.)

Das neue Gesetz über die direkten Steuern samt den Gesetzen über die Neuregelung der Finanzwirtschaft der territorial Selbstverwaltungsverbände und über die Stabilisierungsbilanzen, sowie den zur Durchführung dieser Gesetze verlautbarten Regierungsverordnungen, Kundmachungen und wichtigsten Erlässen. (Reichenberg: Gebrüder Stiepel. 1928. Pp. 640.)

Population and Migration

New Books

Blanchard, J. H. *Histoire des acadiens de l'Ile du Prince Edouard.* (Moncton: Imprimerie de l'Evangeline. 1927. Pp. 120.)

Includes valuable statistical material on the Acadian population in Prince Edward Island.

Bruehl, C. P. *Birth-control and eugenics: in the light of fundamental ethical principles.* (New York: J. F. Wagner, 54 Park Pl. 1928. Pp. 249. $2.50.)

States the position of the Catholic Church in regard to these topics.

Buell, R. L. *The native problem in Africa.* Vols. I and II. (New York: Macmillan. 1928. Pp. xiii, 1045, x, 1101. $15.)

Gover, M. *Mortality among negroes in the United States.* Public health bull. no. 174. (Washington: Supt. Docs. 1928. Pp. 69. 15c.)

Gregory, J. W. *Human migration and the future.* (Philadelphia: Lippincott. Pp. 218. $5.)

Lewis, E. R. *America, nation or confusion: a study of our immigration problems.* (New York: Harper. Pp. 424. $3.50.)

Meriam, L., and others. *The problem of Indian administration. Report of a survey.* (Baltimore: Johns Hopkins Press. 1928. Pp. xxii, 872. $5.)

Contains scholarly information in regard to health, education and economic condition of the Indians.

Michels, R. *Sittlichkeit in Ziffern. Kritik der Moralstatistik.* (München and Leipzig: Duncker & Humblot. 1928. Pp. 229. M. 9.50.)

Statistics of illegitimate children in Germany, these being classified according to their origin.

Muntz, E. E. *Race contact.* (New York: Century. 1927. Pp. xiv, 407. $3.75.)

The object of this book is to analyze the cultural effects resultant from the impact of Caucasian culture upon the culture of native peoples. The close contact of higher and primitive cultures is essentially a modern phenomenon. Permanent contact between these extremes of culture did

not begin until the arrival of the Spaniards in America. Professor Muntz confines his exposition to North and South America, Africa, and Australia and Polynesia.

The book is based on data culled from accounts of travels, historians of colonization, and anthropological treatises and reports. There is much, but not overmuch, attention to economic conditions and processes—the influence of race contact on the evolution of economic concepts among the lower peoples, easement or intensification of the struggle for existence, the land question, the disintegration of native economic and social organization, the loss of native productive technique, the effect of labor recruiting (slavery, forced labor), and depopulation.

The work has been conscientiously well done. Some question might be raised as to the scientific validity of the method, but probably it is adequate for a general survey of this type. For more detailed and exacting requirements it would doubtless have to be checked by first-hand research upon more specific areas and types of native culture. The broad outlines stand out sufficiently distinct. The coming of the white man, whether missionary or trader or settler, has for the most part been a tragedy for the native. The fatality of the whole thing is impressive. Even where the white man has tried to raise the culture of the lower races and protect them from the greed of his kind, he has usually bungled. The Puritans, the Jesuits, the missionaries to Africa and the South Seas, and our own Bureau of Indian Affairs, in their handling of native problems, all reveal the bad results which flow from ignorance and the unconscious bigotry of white culture.

The book should be welcomed by the sociologist and the economic historian. The chapters on population are well done, but do not add much to knowledge already available.

A. B. Wolfe

Sanderson, D. *A population study of three townships in Cortland County, New York.* Memoir 111. (Ithaca: Cornell Univ. Agric. Experiment Sta. 1928. Pp. 19.)

Jewish communal survey of Greater New York. Section 1, *Studies in the New York Jewish population.* (New York: Bureau of Jewish Social Research. 1928. Pp. v, 45.)

Migration laws and treaties. Vol. I. *Emigration laws and regulations.* Studies and reports, ser. O (migration), no. 3. (Geneva: International Labour Office. 1928. Pp. xx, 403. 7s. 6d.)

Statistical report on the external migration of the Dominion of New Zealand for the year 1927. (Wellington: Census and Statistics Office. 1928. Pp. xii, 30.)

Social Problems and Reforms

NEW BOOKS

Chassee, L. J. *Management of personal income.* (Chicago and New York: Shaw. 1927. Pp. iii, 147. $1.74.)

The title of Mr. Chassee's book challenges attention. Necessity, or the desire to direct one's life rationally, leads most of us to an interest in the problem of spending. Any promise, therefore, of direction in the management of one's personal income stirs hope of help.

The author (p. 8) tells us that he has attempted to show "how individuals may better manage their economic life; how this may be accomplished if efficient thought and effort are given to the subject; how important it is to make personal studied finance a part of our daily lives; how, as a result, the whole economic fiber of the community may become finer as well as stronger."

Despite the intriguing title and this able statement of the problem and the intention to render us all a much needed service, the volume does not measure up to the author's or the reader's hopes. The whole book is worked out on ideological lines. In sum, it is a series of admonitions whose point of departure is a theory of thrift acceptable because of its generalizations, reputable largely because it is ancestral. To face the perplexities with which the vigorous producing public of our times surrounds him, the user of income is given only the customary platitudes about prudence and planning and saving and personal control and self-mastery. In short, the book belongs to that class of literature which advises the young and the old that to be good, one must follow the path of virtue. There is no constructive inspection of what "virtue" is. The current scale of wants is accepted without question. No apparent interest in money's worth disturbs the author's sense of security in his somewhat smug ideal of satisfactory spending.

JESSICA B. PEIXOTTO

DUBLIN, L. I. *Health and wealth. A survey of the economics of world health.* (New York and London: Harper. 1928. Pp. xiv, 361. $3.)

FOLSOM, J. K. *Culture and social progress.* Soc. sci. ser. (New York: Longmans Green. Pp. 567. $3.)

GULICK, L. *The National Institute of Public Administration: an adventure in democracy.* (New York: National Inst. of Pub. Admin. 1928. Pp. 106. $1.25.)

NIMS, E. *The Illinois adoption law and its administration.* Soc. Service monographs no. 2. (Chicago: Univ. of Chicago Press. 1928. Pp. 143.)

ROUTZAHN, M. B. S. and ROUTZAHN, E. W. *Publicity for social work.* (New York: Russell Sage Foundation. Pp. 410. $3.)

SANDERSON, D. *A survey of sickness in rural areas in Cortland County, New York.* Memoir 112. (Ithaca: Cornell Univ. Agric. Experiment Sta. 1928. Pp. 27.)

SIMS, N. L. *Elements of rural sociology.* (New York: Crowell. 1928. Pp. xiv, 698. $3.75.)

"An approach to country life in part from the angle of the urbanite." Topics discussed include physical and mental characteristics of rural people and their movements; the rural family, school and church, and other cultural elements affecting the rural population; the farmer's wealth and standard of living; and finally the historical influences moulding the agricultural structure. The author is professor of sociology in Oberlin College.

VON WIESE, L. *Das Dorf als soziales Gebilde.* (München and Leipzig: Duncker & Humblot. 1928. Pp. viii, 89. M.4.)

A collection of papers by many authors on the sociology of the German village.

Wood, A. E. *Community problems.* (New York: Century. 1928. Pp. 603. $3.75.)

Accident facts, 1928. Public safety series, no. 17. (Chicago: National Safety Council. 1928. Pp. 45.)

The distress in South Wales: health of mothers and babies imperilled. Report of Labour Committee of Inquiry. (London: Labour Pubs. Dept. 1928. Pp. 18. 1d.)

Division of Housing and Town Planning, Department of Public Welfare, Commonwealth of Massachusetts: annual report of the year ending November 30, 1927. (Boston: State House. Pp. 11.)

Sources of information concerning the operation of the Eighteenth Amendment: a report of a special advisory committee of the Social Science Research Council. (New York: Social Science Research Council, 50 E. 42nd St. 1928. Pp. 70, mimeographed.)

Insurance and Pensions

NEW BOOKS

Baldwin, W. E. and Keeler, M., editors. *New York insurance law service.* Vols. I-VI. Perpetual rev. ed. (New York: Banks Law Pub. Co. 1928. Pp. x, 191; ix, 240; ix, 191; viii, 91; x, 141; viii, 122. $30.)

These six ready-reference manuals supersede the single volume annually issued since 1906 on the New York insurance law, annotated. They contain the text of the law in its various branches with sources and annotations, and are in "perpetual revision binders" to allow for expansion as subsequent changes take place. Cumulative supplements containing all new legislation and notes from current decisions of the courts, rulings of the insurance department and opinions of the attorney-general will make unnecessary new editions for some years.

F. E. W.

Cloud, A. D. *Analysis of the pension system of the Milwaukee employees pension association.* (Chicago: Hawkins & Loomis. 1927. Pp. vi, 89.)

Doring, H. *Die Luftversicherung, Entwicklung, Recht und Technik.* Veröffentlichungen des Deutschen Vereins für Versicherungs-Wissenschaft, Heft XLII, edited by Alfred Manes. (Berlin: E. S. Mittler. 1928. Pp. 232.)

This is a comprehensive description of aviation insurance dealing with its history, technical and legal bases, industrial accident, sickness, invalidity, unemployment insurance, and the private insurance of air risks of all kinds.

F. E. W.

Frederick, F. W. *Woolen and silk mills.* Lectures given before the senior students in fire insurance on March 6 and 13, 1928. (New York: Insurance Soc. of N.Y. 1928. Pp. 21.)

Relating to insurance risk.

Woods, E. A. *The sociology of life insurance.* Life insurance: its economic and social relations, series. (New York: Appleton. 1928. Pp. xix, 331. $2.50.)

This seventh of the specialized studies of life insurance is sociological only in the broad sense that it offers insurance as an agency for constructive good in dealing with poverty, disease, old-age dependency, unemployment, and ineffective philanthropy. It contains information much of which is similar to what already appears in earlier volumes, and is primarily descriptive of the institutional services of life insurance.

F. E. W.

Report on the insurance statistics of the Dominion of New Zealand for the year 1926. (Wellington: Census and Statistics Office. 1928. Pp. xv, 28. 2s.)

Voluntary sickness insurance. Studies and reports, series M (social insurance), no. 7. (Geneva: International Labour Office. 1927. Pp. xlviii, 470. 8s.)

Pauperism, Charities, and Relief Measures

NEW BOOKS

COHEN, J. L. *Mothers' allowance legislation in Canada.* (Toronto: Macmillan. 1927. Pp. 134.)

A legislative review and analysis with a proposed "standard" act. A description of legislation in Alberta, British Columbia, Manitoba, Ontario and Saskatchewan with comparisons as to qualifying disabilities of child or guardian, status of guardian to whom the allowance may be paid, residence qualifications and inter-provincial coöperation, citizenship, dependents and financial position of applicant; amount of allowance and extent of operation. Recommendations for improvement and extension of the legislation are included; and a "standard" act is given in the appendix. There is also given a tabular summary of Canada's laws and a bibliography. The preface is written by Tom Moore.

H. A. I.

The dependent aged in San Francisco. Prepared under the Heller Committee for Research in Social Economics of the University of California. (Berkeley: Univ. of California Press. 1928. Pp. xiv, 127.)

This study was undertaken in order to discover what was being done for the care of the aged in San Francisco. The number of aged persons receiving some type of philanthropic care was found to be 2,156 or six per cent of the population over 60 years of age. The efforts to discover the causes of their poverty reveal such facts as these: some through unwise investments, loose living, extravagance and unusual stupidity lost their savings; but a larger number suffered from meager earnings intensified by illness, misfortune or death of chief breadwinner of family. Many sad examples are given to illustrate the fate of the aged poor. One chapter deals with the aged homeless man, who is indeed a sorry spectacle, but not so through his own fault alone.

In the discussion of methods of caring for aged dependents the San Francisco relief home is described, facts are given for six private homes for the aged, and the out-relief work of eleven private agencies is briefly set forth. A separate chapter describes the methods used by Alameda County, and a final chapter deals with the cost of caring for the aged in San Francisco. The appendix attempts to estimate the cost of a state pension system.

GEORGE B. MANGOLD

Some American almshouses: a study. (New York: National Civic Federation, Woman's Dept. 1927. Pp. 95.)

A study of 75 almshouses located in Connecticut, New Jersey, New York, and Pennsylvania. Among the findings are the following: Nearly one-half of almshouse inmates are under 65; feeble-mindedness and chronic diseases are the chief problems; almshouse buildings are often inadequate and poor; food is usually wholesome; abuse is uncommon; almshouses are becoming a haven for those afflicted with chronic diseases, but their methods of caring for the sick are most unsatisfactory; and the almshouse population is decreasing, owing to the development of other forms of welfare work. The report includes four chapters dealing respectively with the almshouses in the four states studied. It is recommended that the county be made the smallest unit of administration, both in respect to almhouses and to other forms of poor relief.

George B. Mangold

Socialism and Co-operative Enterprises

NEW BOOKS

Stekloff, G. M. *History of the First International.* (New York: International Pubs. 1928. Pp. xi, 463. $3.50.)

Translated from the Russian edition by Eden and Cedar Paul. The translators also provide over 30 pages of notes and a bibliography of 4 pages.

The coöperative movement and socialism. Report of a committee. (London: Independent Labour Party. 1928. 6d.)

Statistics and Its Methods

Haberler, G. *Der Sinn der Indexzahlen: eine Untersuchung über den Begriff des Preisniveaus und die Methode seiner Messung.* (Tübingen: Mohr. 1927. Pp. ix, 134. M. 7.20.)

The sub-title of this excellent little book: "An examination of the concept of the price-level and the methods of its measurement," admirably describes its purpose and content. The specialist in monetary theory will recognize at once a problem whose origins are virtually contemporaneous with the beginnings of that serious discussion of monetary problems which emerged as soon as attention was distracted from those malpractices with respect to the coin of the realm which were the plague of the Middle Ages. Bodin, it will be remembered, began his famous *Reply to the Paradoxes of Malestroit* by questioning Malestroit's right to adduce the price of such things as velvet in "proof" of the contention that what would now be called the "general price-level" had not risen, in terms of coins of a given bullion content. The same sort of objection appeared, thereafter, in the course of virtually every controversy in which statistics were adduced to prove or to

disprove a movement in the "general" price-level. It was inevitable, therefore, that the attention of statistical workers should be directed to the possibilities of a new alchemy which should produce the "perfect" measure of the general price-level. If we are to take seriously the triumphant assertions of some of the adepts in the new science, the precious "element" has at last been found, and the problem is definitively solved.

To students of monetary problems who really believe that this is so, this little book of Dr. Haberler's is to be recommended as a first aid for present ailments, and a prophylactic against future infection. The book has nothing in common with the productions of those critics of the use of index-numbers, and of the quantitative method generally, who think that they score a conclusive triumph against that method when they show, for example, that index-numbers give widely different results, according to the formula used, or the specific price-data employed. The first half of the book is devoted to a systematic survey of the technique of index-number construction which, from the standpoint of inclusiveness, can hold its own with any in the field, and, from the standpoint of moderated and balanced judgment, can be said to surpass most of its rivals. Dr. Haberler is not concerned in any large way with the imperfections in technique which such a survey discloses. His central argument proceeds from assumptions quite different from, and leads to conclusions quite at variance with, those of the shoddy criticisms which, in arguing from the admitted diversity in statistical results to a pretended proof of falsity of the statistical method, unwittingly provide the best possible argument for a more elaborate development of that method.

Dr. Haberler's own argument leads to the conclusion that measurement of "objective" changes in the "general price level," or in "general" real income, is impossible; more especially, that the reason for this lies "not, as one might imagine, in an inadequacy of statistical methods, nor even in inadequate knowledge of the necessary data, ... but in the very nature of the problem"; and that while, for certain practical purposes, there is a sense in which we can speak of changes in the "general" price level of a given country (*volkswirtschaftliche Preisniveau*), the basis for such a concept is "a statistical accident," and does not lie "in the nature of things."

If anyone doubts that careful critical analysis of underlying theoretical assumptions is the first step in the indication of wise economic practice, let him read Dr. Haberler's brief discussion of mechanical proposals for price-stabilization and the control of business cycles, in the two closing chapters of his book. Those at present in control of our credit-mechanism seem to have come to similar conclu-

sions; partly, perhaps, by instinct, but partly, also, through hard contact with reality, which inevitably brings realization of the infinite complexity of phenomena that seem so simple to the outsider. It is hardly to be expected that they will read this book, in the hope of strengthening themselves against the periodical attacks of "stabilization fanatics," and their blood-brothers, the index-number fanatics. One may hope, however, that from time to time these authorities will come to economists for advice; and it is to the latter, primarily, that this admirable book is to be recommended.

ARTHUR W. MARGET

NEW BOOKS

BODDINGTON, A. L. *Statistics and their application to commerce.* 4th ed. (London: H. F. Lynch. 1927. Pp. 350. 12s. 6d.)

FRY, T. C. *Probability and its engineering uses.* (New York: Van Nostrand. 1928. Pp. xiv, 476. $7.50.)

HO, F. L. *The Nankai weekly index number of commodity-prices at wholesale in China.* Reprinted from the *Chinese Economic Journal,* May, 1928. (Peking: Chinese Govt. Bureau of Econ. Information. 1928. Pp. 411-417.)

Index numbers of wholesale prices on pre-war base, 1890 to 1927. U. S. Dept. of Labor. (Washington: Supt. Docs. 1928. Pp. 50.)

Report of the Committee on Statistics and Origin of Fires. (New York: National Board of Fire Underwriters. 1928. Pp. 9 and tables.)

Statistical yearbook of Quebec, 1927. 14th year. (Quebec: H. M. Stationery Office. 1927. Pp. xxv, 482.)

PERIODICALS

The Review is indebted to R. S. Saby for abstracts of articles in Danish, Dutch, and Swedish periodicals; to Ralph Radcliffe Whitehead for abstracts of articles in Italian periodicals, and to Harold A. Innis for abstracts of Canadian articles.

Theory

(Abstracts by Morris A. Copeland)

Allport, F. H. *Social psychology and human values.* Internat. Jour. Ethics, July, 1928. Pp. 20. Social psychology is the pure science of society. It studies the processes of control of individuals over each other, including their use of applied social science. But it affects and improves these processes.

Burns, A. T. *A note on comparative costs.* Quart. Jour. Econ., May, 1928. Pp. 6. Under certain conditions, included in the classical theory, one product may be increased by international trade and the other decreased.

Douglas, P. S. *An approach to the law of production and its relation to the welfare of the wage-earner.* Am. Econ. Rev. (Suppl.), Mar. 1928. Pp. 27.

Fay, C. R. *Classical theory of international trade.* S. W. Pol. and Soc. Sci. Quart., Mar., 1928. Pp. 6. Capital is too mobile for Ricardo's theory and labor not sufficiently mobile, even inside a single country. Ricardo's theory of gold movements is his real contribution, although his view on the value of gold in rich and poor countries shows less historical perspective than Smith's.

Homan, P. T. *Issues in economic theory: an attempt to clarify.* Quart. Jour. Econ., May, 1928. Pp. 33. The issue as to the significance of the facts for economic theory is really one of interpretation of those facts from different viewpoints. The issue as to psychological viewpoints is inconclusive apart from its bearing on social theory. And the issue between the organic and mechanistic views of society is not clearly jointed. While a neat, systematic theory of economic phenomena is not to be expected, the younger economists have gone too far in discarding old methods and hypotheses—both views have their place. Careful analysis of facts and attention to problems of social control may be expected to resolve current issues in a less generalized, more detailed economics.

Knight, F. H. *A suggestion for simplifying the statement of the general theory of price.* Jour. Pol. Econ., June, 1928. Pp. 18. In any society organized for maximum achievement "the utility of any commodity A measured in units of any other commodity B must be numerically equal to its cost, measured in the same units" in the state of equilibrium. Because of elasticity of supply (practically constant cost being typical) the supply blade of the scissors is casual in determining price. In distribution each factor-unit (its classification not being important) receives its specific or incremental product, pure profits being nil.

Kozlowski, W. M. *The logic of sociology.* Am. Jour. Sociology, May, 1928. Pp. 10. Distinguishes the historical, descriptive-classificatory, and normative methods, and that of abstraction. Sociology uses all four. The possibilities of formulating sociological laws are limited by the fewness of the numbers of uniform events and by the normative character of social science.

Mitchell, W. F. *Interest rates as factors in the business cycle.* Am. Econ. Rev. (Suppl.), Mar., 1928. Pp. 14.

Pigou, A. C. *An analysis of supply.* Econ. Jour., June, 1928. Pp. 20. Marginal utility of money being equal for all parties, maximum satisfaction is attained if output is such that marginal cost to the industry as a whole (less that part of marginal cost involving no net increase in cost to the community as a whole) equals demand price.

Predöhl, A. *Theory of location and general economics.* Jour. Pol. Econ., June, 1928. Pp. 20. Conceives location as a problem in proportion of factors: (1) land,

(2) labor and capital, (3) transportation. Regards Weber's theory for manufactures as of limited applicability, because it is couched in physical rather than price terms.

SHOVE, G. F. *Varying costs and marginal net products.* Econ. Jour., June, 1928. Pp. 9. Whether or not enlargement of output causes a net advantage to the community beyond the added return to the cost factors of production depends not on its effect on the cost of the marginal unit but on that of the rest of the output. It is not directly connected with the distinction between increasing and decreasing returns, but with the relation between cost of the marginal unit and "final trade cost."

SOUTHWORTH, J. *Productivity theories of the trade cycle.* Econ. Jour., Mar., 1928. Pp. 4. Because of imperfect mobility of factors, improved technique may lead to a general over-supply of labor, and of commodities, and to a general over or under-supply of capital.

TAJIMA, E. K. *Economic ideas revealed in the Chung Young.* Kyoto Univ. Econ. Rev., Dec., 1927. Pp. 27. This Confucianist "doctrine of the mean" supports the philosophy of natural law and its consistency with historical relativity. It also preaches a doctrine of true and harmonious social solidarity.

WAGENFÜHR, H. *"Theoretische" und "historische" Volkswirtschaftslehre vom heutigen Stand der Forschung.* Schmollers Jahrb., Feb., 1928. Pp. 24. The historical and theoretical approaches are complementary but the main concern of today is with the latter.

WATKINS, G. P. *Parity in the exchange of future money and future commodities.* Quart. Jour. Econ., May, 1928. Pp. 22. In applying the theory of supply and demand to commodity exchanges it is necessary to take account of "the tendency of futures to be below a price that would contain a minimum carrying-charge difference between the present spot price and that of the same quality of grain in the delivery month—a downward bias" not to be confused with Böhm-Bawerk's discount on future goods.

Economic History (United States)

(Abstracts by Amelia C. Ford)

BECK, P. E. *Christian Myers, immigrant iron master and a founder of Clarion County.* Papers of Lancaster Co. Hist. Soc., vol. XXXI, nos. 9 and 10. Contains list of iron furnaces operating in Clarion County between 1828 and 1860.

BRADLEE, F. B. C., compiler. *Some records of Marblehead's foreign commerce, 1789-1850.* Essex Inst. Hist. Collections, Jan., 1928.

BURTON, H. T. *History of the J. A. ranch.* Southwestern Hist. Quart., Jan., 1928.

BUTLER, L. *The Louisiana planter and his home.* La. Hist. Quart., July, 1927.

DUPONT, C. H. *History of the introduction and culture of Cuba tobacco in Florida.* Fla. Hist. Soc. Quart., Jan., 1928.

FORD, J. A. *The New California in Western Mexico.* World's Work, June, 1928. Pp. 9. Describes the new railroad, built by American capital, that parallels the west coast of Mexico, making available immense natural resources and bringing Los Angeles nearer Mexico City than Chicago.

GRAY, L. C. *Market surplus: problem of colonial tobacco.* William and Mary Coll. Quart. Hist. Mag., Jan., 1928.

HOPKINS, J. A. *Economic history of the production of beef cattle in Iowa.* Iowa Jour. Hist. and Politics, Apr., 1928. Pp. 91. Deals with the grazing industry in Iowa, the place of beef cattle in the farm business, methods of finishing cattle and financing of the cattle business; second installment of the article; to be concluded in July number.

JOHNSTON, J. G. *When Fort Erie was distributing centre for the Middle West.* Welland Co. Hist. Soc. Papers and Records, vol. III, 1927. Pp. 8. Description of Fort Erie prior to the opening of the Erie Canal, with valuable extracts from

an account book, dated 1822, of Solomon Traffick, a wealthy merchant of Fort Erie.

LEONARD, L. O. *The founders and builders of the Rock Island—Marcus A. Low.* Rock Island Mag., Jan., 1928.

————. *The first railroad built into Des Moines in 1866.* Rock Island Mag., Jan., 1928.

MAGNUSSON, C. E. *Hydro-electric power in Washington.* Wash. Hist. Quart., Apr., 1928. Pp. 9. Discusses the power plants already in operation in the state, and the power possibilities yet to be developed, with two chart-maps illustrating each. "The Columbia River, proper, ... has more than twenty-seven times the power developed by the famous Wilson Dam."

McALLISTER, H. *The Colorado Land and Improvement Company.* Colorado Mag., Dec., 1927.

MITCHELL, B. *The Industrial Revolution in the South.* Am. Labor Legis. Rev., Mar., 1928. Pp. 10. An extremely able analysis showing how three superficial forces,—(1) the former institution of negro slavery, (2) the quality of the leaders and (3) sectional consciousness,—have operated along with fundamental causes common to the development of industry everywhere, to make the South backward in its labor conditions. Gives reasons why he believes the South will soon be abreast of the times in her treatment of industrial workers.

MORIN, P. *De Paris au Ouinipègue en 1837. Manuscrit inedit de Pierre Louis Morin d'Equilly, membre de la Société de Géographie, chevalier de l'ordre du Lys, chef du Service du Cadastre du Canada, revu et annoté par son petit-fils avec une notice biographique.* Trans. Royal Soc. of Canada, vol. XXI, sec. 2. Pp. 18. A valuable description of a journey leaving Paris May 6, 1836, arriving in London May 9; leaving London June 1, and arriving at York Factory October 18; leaving York Factory December 8, arriving at Norway House December 19; leaving February 4, 1837, and arriving at St. Boniface on February 13.

PARR, E. L. *Kentucky's overland trade with the ante-bellum South.* Filson Club's Hist. Quart., Jan., 1928.

STEVENS, W. E. *The northwest fur trade, 1763-1800.* Univ. of Ill., Studies in the Soc. Sciences, vol. XIV, no. 3.

STEWART, R. *The farming business.* Atlantic Mo., June, 1928. Pp. 8. Considers farming has slowly evolved from a mode of living into a business proposition, and therefore that the solution of the farm problem will not be political but a purely business one; discusses several instances of successful farming enterprises carried on according to good business methods like any other industry.

WAGNER, P. E. *Economic conditions in western Pennsylvania during the Whiskey Rebellion.* West. Pa. Hist. Mag., Oct., 1927.

WHITAKER, A. P. *The commerce of Louisiana and the Floridas at the end of the eighteenth century.* Hispanic Am. Hist. Rev., May, 1928. Pp. 14. The commercial history of Louisiana from 1768 to 1800 evolved "from monopoly through contraband to partial freedom, then greater freedom and finally to separation. . . . . Spain's inability to provide its colonies with goods and other capital for their development arrayed against Spain both the colonists, ... and the foreign investors who were ready to supply the needed capital."

WHITBECK, F. *New York Barge Canal: expectations and realizations.* Econ. Geog., Apr., 1928. Pp. 11. Discusses the history of the barge canal and finds the reason for its failure in the fact that such waterways are now obsolete in the U. S. as we have passed out of the canal and river period of transportation. Illustrated.

WHITE, L. *Iron and steel industry of the Pittsburgh district.* Econ. Geog., Apr., 1928. Pp. 25. Points out the advantages and drawbacks of Pittsburgh as a center for the steel industry, and the contest for supremacy now going on between the Pittsburgh district and the Chicago district with eventual victory for the latter assured if economic factors alone prevail; but the influence of the great corporation leaders also has to be reckoned with.

WITTER, MRS. D. *Pioneer life.* Colorado Mag., Dec., 1927.

Iowa and the Illinois Central. Ill. Central Mag., Nov., 1927.

Economic History (Foreign)

ASKWITH, LORD. *The empire's tin supplies.* United Empire, Mar., 1928. Pp. 4.

BAIN, H. F. *The third kingdom: some reflections on our mineral heritage.* Geog. Rev., Apr., 1928. Pp. 18.

BAUDIN, L. *L'influence américaine sur l'économie, britannique d'aprés les banquiers anglais.* Rev. d'Econ. Pol., Mar.-Apr., 1928. Pp. 15.

CLAY, H. *The liberal industrial report.* Econ. Jour., June, 1928. Pp. 11.

EASTMAN, M. *International aspects of European coal crisis.* Jour. Pol. Econ., Apr., 1928. Pp. 10.

GUASTAMACCHIA, M. *Il commercio ital-argentino.* Annali di Econ., Mar., 1928. Pp. 145. A good account of Argentina in reference to its production and its commerce with Italy.

HAUSER, H. *Les origines historiques des problèmes économiques actuels.* Rev. d'Econ. Pol., Mar.-Apr., 1928. Pp. 9.

HORAK, J. *Effects of the war upon emigration from Czechoslovakia.* Social Service Rev., Mar., 1928. Pp. 6.

HORN, E. *La situation économique et financière en Hongrie.* L'Econ. Franç., May 19, 1928. Pp. 2.

JONES, J. H. *The new capitalism.* Jour. Inst. Bankers, Apr., 1928. Pp. 9.

MAAS, W. *Zur Entwicklung der polnischen Agrastruktur vom XV bis XVIII Jahrhundert.* Vierteljahrsch. für Soz. und Wirtschaftgesch. XX Band, 3 and 4 Heft. Pp. 8.

MASSICOTE, M. E.-Z. *Auberges et cabarets d'autrefois. Notes sur l'industrie de l'hôtellerie à Montreal sous le régime français.* Trans. Royal Soc. of Canada, 3rd series, vol. XXI, Sec. II. Pp. 15. A valuable description of hotels in Canada in the French régime.

MENARS, O. *La situation économique au Danemark.* L'Econ. Franç., June 2, 1928. Pp. 3.

MOREHOUSE, F. *The Irish migration of the forties.* Am. Hist. Rev., Apr., 1928. Pp. 14.

MORTARA, G. *La vie économique en Italie.* Rev. d'Econ. Pol., Mar.-Apr., 1928. Pp. 22.

PENSON, J. H. *Some problems of Russian public finance.* Jour. Royal Inst. of Internat. Affairs, Mar., 1928. Pp. 7.

POUYANNE, H. *La vie financière en Angleterre.* Rev. d'Econ. Pol., Jan.-Feb., 1928. Pp. 23.

———. *La vie économique en Angleterre.* Rev. d'Econ. Pol., Mar.-Apr., 1928. Pp. 23.

RANKE, E. v. *Der Interessenkreis des deutschen Burgers im 16. Jahrhundert.* Vierteljahrsch. für Sozial und Wirtschaftsgesch, Band XX, 3 and 4 Heft Pp. 16.

ROBINSON, W. A. *Sixty years of Canadian federation.* Pol. Sci. Quart., Mar., 1928. Pp. 16. A survey of Canadian development with some reference to economic progress.

SCHURER, G. *La crisi della cultura alla fine del medio evo.* Riv. Internaz. di Sci. Soc., Feb.-Mar., 1928. Pp. 19. On the cultural crisis at the end of the Middle Ages.

TCHAYANOFF, A. *L'état actuel de l'économie et de la statisque agricoles en Russie.* Rev. d'Econ. Pol., Jan.-Feb., 1928. Pp. 14.

TOURNEUR, A. J. *La protestation de La Rochelle contre l'abandon du Canada 1761.* Nova Francia, Oct. 24, 1926. Pp. 21. Includes parts of a Memoire au Duc de Choiseul, 14 November, 1761, and a Deliberation du corps de ville, 3

March, 1762. Showing the importance of Canada to the economic development of La Rochelle.

Ts'ai, K. *Financial reform in China.* Chinese Soc. and Pol. Sci. Rev., Apr., 1928. Pp. 14

Usher, A. P. *The growth of English shipping 1572-1922.* Quart. Jour. Econ., May, 1928. Pp. 13.

Wolfers, A. *Über monopolistische und nicht-monopolistische Wirtschaftsverbande.* Archiv für Sozialwiss. und Sozialpolitik, 59 Band, 2 Heft. Pp. 31.

Financial and economic development in France. Jour. Bengal Nat. Chamber of Commerce, Dec., 1927. Pp. 10.

Agricultural Economics

(Abstracts by A. J. Dadisman)

Arnold, C. R. *The effect of the corn borer on farm organization in the corn belt.* Jour. Farm Econ., April, 1928. Pp. 14. A discussion of increased cost of production due to the corn borer and possibility of controlling the borer and substituting other crops for corn.

Bhatnagar, B. G. *Agricultural development.* Indian Jour. Econ., Jan., 1928. Pp. 6. Observed instances of agricultural backwardness are cited to show needs for better use of existing resources.

Black, J. D. *Progress of farm relief.* Am. Econ. Rev., June, 1928. Pp. 20.

——————. *Research in farm economics.* Jour. Farm Econ., Jan., 1928. Pp. 26. An analysis of the character and aims of research in prices of farm products.

Brannen, C. O. *The farm tax problem in Arkansas.* Ark. Exp. Sta. Bull. 223, Feb., 1928. Pp. 63. A study of farm taxes in relation to farm property incomes and incomes from other groups, and to farm earnings and assessments. The system is defined and special assessments explained.

Callander, W. F. *Problems in crop and livestock estimating.* Jour. Farm Econ., April, 1928. Pp. 15. Development of crop and livestock estimating, methods employed, and problems encountered.

Cance, A. E. *Preparatory courses for agricultural economics.* Jour. Farm Econ., April, 1928. Pp. 6. An outline for basic training for agricultural economics.

Chew, A. P. *Agricultural depression, some suggested remedies.* New Repub., June 6, 1928. Pp. 3. A review of the generally accepted causes of the agricultural depression.

——————. *A defense of farm price forecasts as made by the department of agriculture.* Annalist, May 25, 1928. Pp. 2. A review of the attacks on forecasting prices of cotton and an explanation of how farmers' interests are served by price forecasts.

Crawford, G. L. *Services, facilities, and costs of marketing vegetables in the lower Rio Grande valley of Texas.* Tex. Exp. Sta. Bull. 378, Mar., 1928. Pp. 39. Kind and quantity of vegetables grown in the region, channels through which they pass to markets, services rendered and cost of each. Data are from survey records from 215 growers.

Englund, E. *Research in farm taxation.* Jour. Farm Econ., April, 1928. Pp. 10. A survey of farm taxation problems and recent research on the problems.

Falconer, J. I. *Research in agricultural income.* Jour. Farm Econ., Jan., 1928. Pp. 10. A summary of literature dealing with agricultural incomes, and a review of methods used in measuring different incomes of different groups.

Fetrow, W. W. *The farmer's part in coöperative marketing.* Okla. Exp. Sta. Bull. 174, Mar., 1928. Pp. 23. An attempt to find out farmers' attitudes towards coöperatives and to outline their duties towards coöperative marketing. Data are from personal visits to farmers.

Foreman, C. J. *Agricultural rent liens as a menace to commerce.* Jour. Land and Pub. Util. Econ., May, 1928. Pp. 14. The history and evolution of the present form of the lien, and the relative bearing of the statutes, as a basis of analysis and classification of various stages in which it appears. Definite lines of legislation are suggested.

Gabbard, L. P. *Effect of large-scale production on cotton growing in Texas.* Jour. Farm Econ., April, 1928. Pp. 11. Trends of cotton production and a consideration of different types of power and types of machinery in relation to their effect on labor requirements in cotton production.

Ganguly, B. N. *Double-cropping in certain regions of overpopulation.* Indian Jour. Econ., Jan., 1928. Pp. 15. A study of the various factors which determine the extent of double-cropping and its economic effects in several provinces of India.

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(Abstracts by Walter J. Couper)

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CLAY, H. *Unemployment and wage rates.* Econ. Jour., Mar., 1928. Pp. 15. A reply to Pigou's contention that unduly high wage rates are a major cause of present English unemployment. So far as this may be true "it is the low wage rates of the depressed industries that are 'too high' not the high wages of the prosperous industries." Maldistribution of labor is a more important cause. This also affects productivity and reduces the economically possible average wage.

DAVIS, M. M. *High cost of being sick.* Am. Labor Legis. Rev., June, 1928. Pp. 10.

FEIS, H. *Workers as capitalists.* Am. Rev. Rev., Apr., 1928. Pp. 5. The Procter and Gamble plan. No broadly diffused sense of ownership, although 90 per cent of those eligible are participating. The results "do not clearly presage any serious modification of the distribution of wealth."

FISHER, W. C. *Employee stock ownership: investment or speculation?* Jour. Elec. Workers, June, 1928. Pp. 9. Venturesome speculation.

FLAEG, F. *Alkohol und Unfall.* Reichsarbeitsblatt, Apr. 10, 1928. Pp. 5.

FOCKEMA, R. A. *Het internationaal arbeidsbureau.* De Econ. (Dutch), May, 1928. Pp. 32. An outline of the work of the international labor bureau.

GEIGES, G. *Over-development in the textile industries.* Am. Fed., June, 1928. Pp. 12.

GEMMILL, P. F. *The literature of employee representation.* Quart. Jour. Econ., May, 1928. Pp. 16.

GREEN, W. *Effect on labor of the new standardization programs of American industry.* Annals Am. Acad., May, 1928. Pp. 4.

HARTLEY, J. H. *Towards industrial democracy.* Fortnightly Rev., May, 1928. Pp. 13. The Liberal Report and Sir Alfred Mund.

HEDRICK, G. F. *The growth of the five-day week.* Am. Fed., Mar., 1928. Pp. 4. One-third plus of the membership of the Brotherhood of Painters, Decorators and Paperhangers in November, 1927, were on the five-day week.

HEWES, A. *Functional representation in the International Labor Organization.* Am. Pol. Sci. Rev., May, 1928. Pp. 15.

HOFFMAN, A. *Durham makes a survey.* Am. Fed., Apr., 1928. Pp. 4. Central Labor Union investigates wages, hours and cost of living.

JEWKES, J. *The mobility of labour in the cotton industry.* Econ. Jour., Mar., 1928. Pp. 3. A study of unemployment insurance cards reveals little movement of labor between comparatively prosperous and constantly depressed sections of the industry. In 45 exchanges only 2.8 per cent of the cards had been issued at other offices.

JOHNSON, F. R. *Case of bituminous coal.* Survey, May 15, 1928. Pp. 2. Federal Council of Churches reports on the coal strike in Western Pennsylvania.

KLEECK, M. VAN. *Recent gains in industrial relations.* World Tomorrow, May, 1928. Pp. 4.

KUCZYNSKI, J. and STEINFELD, M. *Wages in manufacturing industries, 1899-1927,* Am. Fed., June, 1928. Pp. 7. "Three-fourths of the population of the U. S. have not the possibility to live a family life of health and decency."

"LABORITE." *New hope for British industry.* New Repub., June 27, 1928. Pp. 3. Attaches great importance to the General Council—Mund Conferences.

LAUCK, W. J. *A new peace treaty: Mitten management and the union will try coöperation.* Survey, May 15, 1928. Pp. 2. An agreement for all properties acquired in the future.

LOGAN, H. A. *Labor and the law in Canada.* Jour. Bus., Jan., 1928. Pp. 14.

——————. *The one big union in Canada.* Jour. Pol. Econ., Apr., 1928. Pp. 40. The O. B. U., organized on a combination of geographical and industrial lines, is committed to the doctrine of the class-struggle, but differs in policy from both the A. F. of L. and the Workers' Party. Perhaps the most significant feature of its history is the effectiveness of governmental and legal intervention and opposition.

MACMILLAN, J. W. *Minimum wage administration.* Am. Econ. Rev., June, 1928. Pp. 4.

MAGNUSSON, L. *Significant advances in social insurance since the war.* Am. Labor Legis. Rev., June, 1928. Pp. 16. Summary of post-war extensions. These developments reveal a trend towards the principle of universality and away from state absolutism of control towards joint administration.

MAHON, W. D. *An agreement for coöperation.* Am. Fed., June, 1928. Pp. 2.

MANN, L. B. *Occupational shifts in the U.S., 1920-27.* Am. Fed., June, 1928. Pp. 3. Decrease in production, transportation and government service. Increase of over 2,000,000, in trade, professional work and personal services.

MEYER, M. D. *What about unemployment?* Am. Labor Legis. Rev., June, 1928. Pp. 10. Current uncertainty. "All's well" propaganda *vs.* such constructive study and activity as evidenced by new unemployment insurance agreements of the A. C. W. Jones bill, etc.

MORRIS, H. *The industrial court and its working.* Economica, Mar., 1928. Pp. 12. Successful voluntary arbitration. Of the various tribunals available under the Act of 1919—the court, a single arbitrator, or an *ad hoc* board— the court has become the most important.

MUIR, A. *Liberalism and industry.* Contemp. Rev., May, 1928. Pp. 9. Favorable reception of Liberal Industrial Report.

MULLEN, W. H. *Some principles underlying the interpretations of an industrial relations agreement.* Harvard Bus. Rev., Apr., 1928. Pp. 11. The rulings of the impartial board in interpreting the market agreement, as distinct from the Hart, Schaffner and Marx agreement, in the Chicago men's clothing industry. These are: that the terms of the agreement are to be broadly construed; that it is a synopsis of the H. S. M. agreement; that past practice is to apply; that the board would approve negotiated settlements and the "Doctrine of Need" which protect the workers in their unemployment even in the face of drastic reduc-

tions of work. Underlying all these has been the determination to mould a working relationship by accepting jurisdiction on grounds of expediency and rendering decisions in accordance with the state of trade.

Neitzel, G. *Hours and wages in the German heavy iron industry.* Internat. Labour Rev., Apr., 1928. Pp. 13. The dispute of 1927, settled by regulations which imposed the eight-hour day and three-shift system. The application of the orders was determined by two binding arbitration awards.

Nixon, J. W. *The measurement of "risk" in connection with labour statistics.* Internat. Labour Rev., May, 1928. Pp. 18. For each social risk two rates can and should be calculated: the frequency rate, corresponding to the probability of an event; the severity rate, measuring the loss occasioned. Definitions of terms and methods of measurement in fields of accident, sickness, unemployment and industrial disputes.

Pribram, K. *The regulation of minimum wages as an international problem.* Internat. Labour Rev., Mar., 1928. Pp. 15. Limitation to trades inadequately organized or in which wages are well below a customary standard. Countries, *e.g.*, Anglo-Saxon, in which collection agreements are not the general basis for the regulation of conditions of employment, favor the extension of minimum wages to all trades. Countries, *e.g.*, Germany, where collective agreements are of major importance, favor the limiting of minimum wage legislation to home work trades.

Ritzmann, F. *The prevention of accidents in industrial undertakings.* Internat. Labour Rev., Mar., 1928. Pp. 17.

———————. *Die Unfallverhütung in gewerblichen Betrieben auf der Tagesordnung der II. Internationalen Arbeitskonferenz.* Reichsarbeitsblatt, Mar. 10, 1928. Pp. 3.

Ryan, J. A. *The labor injunction in the light of justice.* Catholic Charities Rev., Mar., 1928. Pp. 3. Also in Am. Fed., Mar., 1928.

Samuel, H. *The Liberal Industrial Report.* Contemp. Rev., Mar., 1928. Pp. 8.

Schlimme, H. *The concentration movement of the German trade unions.* Am. Fed., Apr., 1928. Pp. 5. Since 1928, number of unions has decreased from 50 to 35. Concentration has been facilitated by the adoption of a general trade-union card by about thirty unions.

Selekman, B. *Miners and murder: what lies back of the labor feud in anthracite.* Survey Graphic, May, 1, 1928. Pp. 7. The contract system.

Slichter, S. H. *The problem of unemployment.* Catholic Charities Rev., Apr., 1928. Pp. 5.

Speck, P. A. *Measures to combat unemployment in Europe.* Mo. Labor Rev., Apr., 1928. Pp. 14. In addition to unemployment insurance, many countries have adopted relief measures to provide work. Some are temporary such as vocational guidance and relief work. Others, such as encouragement of foreign trade and industrial research, are directed towards permanent improvement in employment opportunities.

Steele, H. E. *Jury acquits strikers in conspiracy trial.* Am. Fed., June, 1928. Pp. 3.

Taylor, P. S. *The Leighton coöperative industries.* Jour. Pol. Econ., Apr., 1928. Pp. 17. The essence of the plan is the concentration of voting control in the hands of one manager with the wide diffusion among employees of 99 per cent of the stock and dividends. It has promoted harmonious relations, has stimulated efficiency and has materially increased the incomes of stockholding workers.

Teissel, L. *Ermüdung and Arbeitszeit als Unfallsveranlassung.* Reichsarbeitsblatt, Apr. 10, 1928. Pp. 3. Daily accident rate at a maximum on Mondays and Fridays; hourly rate, after three hours of uninterrupted labor.

Thomas, A. *Die Entwicklung der internationalen Sozialpolitik.* Reichsarbeitsblatt, May 1, 1928. Pp. 2. One of twenty brief articles in this number on various phases of the subject.

Tso, S. K. S. *Present labor conditions in China.* Mo. Labor Rev., Apr., 1928. Pp. 12.

Verweij, G. *Het vraagstuk der welvaart in de Verenigde Staaten.* De Econ. (Dutch), Apr., 1928. Pp. 16. Discusses the problem of apparent prosperity in the United States in spite of increasing unemployment.

Zimand, G. F. *Child labor and the future.* New Repub., Mar. 21, 1928. Pp. 3. The problem of 1900 required prohibitive legislation. The complex problems of 1928 call for constructive programs, perhaps in terms of continuation schools, preventive medicine, vocational schools, etc.

Accident hazards and compensation rates for window cleaners. Mo. Labor Rev., May, 1928. Pp. 14. This occupation is less hazardous than is popularly supposed. There should, however, be a National Safety Code for window cleaners and the National Safety Council is sponsoring an effort in this direction.

The African labour problem. Round Table, June, 1928. Pp. 24. "Equality of economic opportunity between the white and black races is becoming inevitable."

American Engineering Council's report on safety and production. Mo. Labor Rev., May, 1928. Pp. 4.

Apprenticeship and training inquiry. Min. of Labour Gaz., May, 1928. Pp. 2.

Arbetslöshten under år 1927. Soc. Med., No. 3, 1928. Pp. 3. A tabulated account of unemployment and unemployment relief in Sweden during the year 1927.

Changes in rates of wages and hours of labour in 1927. Min. of Labour Gaz., Apr., 1928. Pp. 3.

Health and recreation activities in industrial establishments. Mo. Labor Rev., Apr., 1928. Pp. 9. Marked increases in medical services, vacations with pay, group insurance.

Hours of labor in Germany: trade union report. Min. of Labour Gaz., Apr., 1928. Pp. 1.

Individual labor contract in New York. Mo. Labor Rev., May, 1928. Pp. 2. I. R. T. Co. *vs.* Lavin and I. R. T. Co. *vs.* Green.

Industrial diseases: analysis of factory inspection reports, 1923: I and II. Internat. Labour Rev., Apr., May, 1928. Pp. 24, 20.

The injunction. Law and Labor, Apr., 1928. Pp. 20. Several articles.

Kvinnors och Minderårigas användande inom industrien i Sverige år 1926. Soc. Med., No. 5, 1928. Pp. 4. A statistical account of the employment of women and children in Swedish industry in its different branches during the year 1926.

Labor agreements: street railways—Mitten management. Mo. Labor Rev., May, 1928. Pp. 3.

Labor turnover in American factories 1927-28. Mo. Labor Rev., Apr., 1928. Pp. 2.

New York State Industrial Survey Commission sustains the importance of freedom of enterprise. Law and Labor, Apr., 1928. Pp. 3. State should be cautious in laying further burdens on industry.

The problem of hours of work in the Soviet Union: I and II. Internat. Labour Rev., Mar., Apr., 1928. Pp. 13, 14. A study inspired by the Soviet Manifesto announcing the intention of gradually introducing the seven-hour day. Discusses the legal eight-hour day and the gradual weakening of the regulations by orders permitting overtime, "non-standardized hours of work," etc.

The *de facto* situation so far as can be determined statistically reveals a gradual decrease. The facts are complicated because of unauthorized overtime.

Rationaliseringsbestræbelserne efter Krigen. Ok. og. Pol., Jan., 1928. Pp. 17. This is a series of articles on the attempts made in Europe at rationalizing industry after the war. H. Hinnenthal writes on the progress made in Germany; V. Muravief on Soviet Russia; and Paul Devinat on the work of the L'Institut International d'Organisation Scientifique du Travail at Geneva.

Recreational activities of labor organizations. Mo. Labor Rev., May, 1928. Pp. 16. "Remarkable activity along recreational and social lines by labor organization."

Seasonal fluctuations in employment. Internat. Labour Rev., Mar., 1928. Pp. 27. Statistical. Wide differences between one country and another.

The southern cotton mills reply. New Repub., June 6, 1928. Pp. 2.

Supreme Court of Ontario, February 11, 1928. Raney, J. Polakoff et al. v. Winters Garment Co. et al. Canadian Bar Rev., Mar., 1928. Pp. 15. An important decision holding that trade unions have no legal existence in the province of Ontario and relying chiefly on the decision of Russell *v.* Amalgamated Society of Carpenters and Joiners, 1912, A. C. 421.

Die Tariflöhne in Deutschland im Jahre 1927 und im Januar-Februar, 1928. Reichsarbeitsblatt, Mar. 1, 1928. Pp. 5. Wage rates for skilled and unskilled in twelve main industries with comparative figures for 1913.

Trade disputes in 1927. Min. of Lab. Gaz., May, 1928. Pp. 3. The smallest number of disputes, 308, for forty years.

Trade unionism in Canada: synopsis of seventeenth annual report. Labour Gaz. (Canada), May, 1928. Pp. 6. Gain of over 15,000. Total membership over 290,000.

Trade union press on the displacement of labor by machinery. Mo. Labor Rev., May, 1928. Pp. 4.

Unemployment and the unions. Am. Fed., Mar., May, June, 1928. A survey of trade-union relief.

Unemployment in the United States: Report of Secretary of Labor. Mo. Labor Rev., Apr., 1928. A shrinkage of 1,874,050 in the number of employed wage and salary workers between January, 1925, and January, 1928.

Die Verbände der Arbeiter und Argestellten im Deutschen Reich Ende 1926. Reichsarbeitsblatt, Mar. 20, 1928. Pp. 4. Altogether 6.3 million, 40 per cent of those insured against unemployment, are organized.

Wage changes in Great Britain, 1922-27. Internat. Labour Rev., May, 1928. Pp. 9.

Money, Prices, Credit, and Banking

(Abstracts by William O. Weyforth)

Atkins, P. M. *Recent trends in the stability of foreign exchange.* Bankers Mag., June, 1928. Pp. 4. Indexes are given showing the comparative stability of European and Latin American exchanges from 1922 to 1927. In both groups a great improvement is evident.

Banos, O. F.. *Dinamismo de los precios y carestia de la vida.* Rev. Nac. de Econ., Jan.-Feb., 1928. Pp. 29. On the causes of the rise and fall of prices, with mathematical formulas.

Blatch, G. *An examination of some foreign exchange transactions.* Scottish Bankers Mag., Apr., 1928. Pp. 14. Explains documents and terms used in foreign exchange transactions, for example, invoice, bill of lading, marine insurance.

Borgatta, G. *La sistemazione monetaria.* Riv. Internaz. di Scienze Soc., Mar.-Apr., 1928. Pp. 18. The monetary systemization and the stabilization of the lira.

Cassel, G. *Import of capital and inflation.* Skandinaviska Kreditaktiebolaget, Apr., 1928. Pp. 4. The problem of the effect of the import of capital upon inflation within a country is considered. The tendency toward such inflation is admitted but it is not unlimited. If the central bank adopts the policy of buying gold exchange slightly below par and of selling slightly above par, the protection against inflation will be automatic.

———————. *American opportunity to stabilize gold values and prices.* Trust Cos., Mar., 1928. Pp. 2. Coöperation between American and European banking authorities is necessary for the stabilizing of the value of gold. Control in the United States should be in the hands of the Federal Reserve Board.

Cauboue, P. *Le rôle monétaire des crédits bancaires.* Jour. des Econ., Mar. 15, 1928. Pp. 16. Analyzes the rôle of banks in the monetary system of a country. Considers this rôle as important but not as preponderant as some have assumed. He criticizes particularly, and points out limitations to, the theory that banks create deposits by their loans.

Dalla Volta, R. *Il sistema del cambio aurea fisso.* Riv. di Pol. Econ., Apr., 1928. Pp. 8. On the gold exchange standard system.

Davison, G. W. *Interpreting America's gold supply and reserve policy in terms of trusteeship.* Trust Cos., May, 1928. Pp. 4. It is denied that gold has been deliberately sterilized in the United States. American banking policy since the great influx of gold has been to regard this country as the trustee of this gold which will eventually flow back to other countries, and the use of gold as a basis of credit has been safeguarded with this prospect in view.

Ellsworth, D. W. *Rise in time money forecasts decline in stocks; rediscounts increasing.* Annalist, May 4, 1928. A rise in time money rates about five per cent has in the past usually proved an index of a decline in stocks.

Fanno, M. *Credit expansion, savings and gold export.* Econ. Jour., Mar., 1928. Pp. 6. Attempts to extend the analysis of Mr. G. H. Robertson in regard to the manner in which credit expansion may bring about enforced saving so as to allow for the effects of international trade.

Friday, D. *Present trend and probable future of interest rates.* Trust Cos., Mar., 1928. Pp. 3. The rate of interest is governed by the supply of and the demand for capital. The large supply of capital since 1920 has been due to the great savings made possible by high productivity. The savings are likely to continue with perhaps some slackening in the demand for capital leading to still further declines in interest rates.

Greidanus, T. *Is vrije creditet-creatie door banken mogelijk?* De Econ. (Dutch), Apr., 1928. Pp. 17. Discusses the ability of commercial banks to manufacture credit and place it at the disposal of business men.

Iongh, D. C. de. *The development of the discount market in Amsterdam.* Acceptance Bull., Apr. 30, 1928. Pp. 6. The main features of the discount market in Amsterdam are outlined.

Johnes, T. *The recent banking crisis and industrial conditions in Japan.* Econ. Jour., Mar., 1928. Pp. 6. Describes the crisis in the spring of 1927 in Japan. It is explained as being due to the writing off of bad debts and a writing down of values, work which should have been completed five years ago, but which was delayed by the great earthquake of 1923.

Keynes, J. M. *The amalgamation of the British note issues.* Econ. Jour., June, 1928. Pp. 8. A criticism of the recent bill providing for the amalgamation of the currency notes and bank notes in Great Britain. Mr. Keynes thinks that the fiduciary issue should be larger than that provided—£260,000,000—leaving a larger amount of free reserve in the bank of England.

Lachapelle, G. *La première bataille du franc* (1924). Jour. des Econ., Apr. 15, 1928. Pp. 16. Describes the causes of the decline of the franc in the early part of 1924 and the steps taken by the ministry and the bank of France to remedy the situation.

Marshall, H. *Index numbers of security prices.* Jour. Canadian Banking Assoc., Apr., 1928. Pp. 7. Describes the methods in use by the Dominion Bureau of Statistics for determining index numbers of security prices.

Mills, F. C. *Post-war prices and pre-war price trends.* Jour. Am. Stat. Assoc., Mar., 1928. Pp. 23. The dispersion of year-to-year commodity price changes and the variability of prices of individual commodities have been greater in the U. S. than in older countries, but have been declining except for the war period. There was a marked divergence in the pre-war trends of different commodity prices. The trends of labor incomes and agricultural prices indicate an improved condition of agricultural and wage workers. The divergent trends of raw material prices, and industrial-product prices at wholesale and retail suggest economies in production not matched in marketing. All these features result from the dynamic condition of our society.

Papi, G. U. *Vigilanza sulla creazione di moneta bancaria.* Giorn. delgi Econ., Mar., 1928. Pp. 25. On the regulation of the issue of notes and bank credits.

PHIPPS, A. E. *The Canadian banking system.* Jour. Canadian Bankers Assoc., Apr., 1928. Pp. 7. A defense of the present banking system of Canada.

SGAGNETTI, G. *Banca del Reich—Banca tendesca di rendita—Banca tedesca di sconto*
SGAGNETTI, G. *Banca del Reich—Banca tendesca di rendita—Banca tedesca di sconto*
action of the Reichsbank, before and during and after the war.

SIDDONS, F. P. H. *Segregation of savings deposits.* Trust Cos., Apr., 1928. Pp. 4. Summarizes the laws of several states relating to the segregation of savings accounts and considers the arguments for and against such a policy.

SINGER, K. *Prolegomena zu einer Theorie des Goldmarkets.* Schmollers Jahrb., Feb., 1928. Pp. 26. Distinguishes between the money market and the capital market. Discusses the relationship between the money market and the medium of exchange and between the money market and capitalism.

SINHA, J. C. *Land mortgage banking with special reference to Bengal.* Indian Jour. Econ., Jan., 1928. Pp. 14. Problem of providing long-term credits for ryots in India can be solved most satisfactorily by having the central banks take up land mortgage banking in a separate department, and having the loans made by primary credit societies under the central banks.

SOMMARIN, E. *Bankinspektionen i Sverige.* Nat. ök. Tids., no. 1, 1928. Pp. 26. Observations and reflections on the purposes and practical operation of bank inspection in Sweden.

SPRAGUE, O. M. W. *Brokers' loans dangerous—reserve banks largely responsible for inflation.* Annalist, Apr. 20, 1928. Pp. 1. When the stock market is found to be absorbing constantly increasing amounts of bank credit at rising rates, the stock market is unquestionably under the controlling influence of a demand that rests upon no solid foundation of intelligent foresight.

TAPPAN, M. *Mr. Robertson's views on banking policy: a reply to Mr. Harrod.* Economica, Mar., 1928. Pp. 15. A reply to criticisms made by Mr. R. F. Harrod in *Economica,* June, 1927, of Mr. G. H. Robertson's *Banking Policy and the Price Level.*

TINNES, D. J. *An American monetary standard.* Quart. Jour. Univ. N. Dakota, Jan., 1928. Pp. 8. A brief exposition of a system of price stabilization based upon daily index numbers of wholesale prices. Stabilization is to be effected by changes in the weight of the dollar. It is maintained that the buying power of money varies not merely inversely with the number of units of money but also directly with the magnitude of an individual unit.

TSUSHIMA, J. *Banking reform in Japan.* Bankers' Mag. (London), Mar., 1928. Pp. 8. Describes banking legislation in Japan in 1927 which was designed to remedy weaknesses in the banking system and to bring the legislation in line with recent banking development.

VOLPI, G. *La riforma monetaria illustrata dal ministro delle finanze.* Giorn. degli Econ., Apr., 1928. Pp. 22. The monetary reform in Italy.

WATKINS, G. P. *Parity in the exchange of future money and future commodities.* Quart. Jour. Econ., May, 1928. Pp. 22. Points out the tendency of the prices of futures in such things as cotton and wheat to show a downward bias as compared with spot prices and endeavors to account for this tendency.

WILLIS, H. P. *Why the Federal Reserve and National Bank acts need thorough revision.* Annalist, Mar. 16, 1928. Pp. 3. The author advocates revision of the National Bank act, which he considers obsolete, and also revision of the Federal Reserve act so as to provide for changes in the structure of the federal reserve system, changes in the relation of the system to the government, and changes in the powers and duties of the reserve and member banks.

La banque de France en 1928. Jour. des Econ., Feb. 15, 1928. Pp. 19. The operations of the Bank of France during 1927 and business conditions in France in that year are summarized.

De Franske Statsfinanser. Ok. og Pol., Jan.-Mar., 1928. Pp. 12. A brief account of

French national finances before 1914 and of Poincaré's efforts in balancing the budget and stabilizing the franc.

Interlocking bank directorates. Commerce Mo., June, 1928. Pp. 5. The provisions of the original Clayton act of October 15, 1914, are explained as well as the three enacted amendments and one proposed amendment liberalizing that law.

La monnaie suisse. L'Econ. Franç., Apr. 14, 1928. Pp. 2. The history of the Swiss monetary system from the first federal monetary law in 1850, including the formation of the Latin Monetary Union in 1865, is outlined. The writer favors the discontinuance of silver coins of unlimited legal tender and thinks that the time is ripe for the establishment of the gold standard or preferably a gold exchange standard.

Public Finance

(Abstracts by Charles P. Huse)

Elbel, P. *La réforme douanière et le Parlement.* Rev. d'Econ. Pol., Mar.-Apr., 1928. Pp. 16. The new French tariff which makes many changes, increases the rates on agricultural products. While many are dissatisfied with it, it would seem best to allow the new Parliament to deal with other problems, such as the stabilization of the franc, before turning again to the tariff.

Fasiana, M. *Della doppia tassazione del risparmio.* La Riforma Soc., Mar.-Apr., 1928. Pp. 17. On the double taxation of savings.

Hendricks, H. G. *Taxing the original unbroken package.* Bull. Nat. Tax Assoc., Feb., 1928. Pp. 9. Recent decisions uphold the right of a state to tax goods which have come from another state and are still in the original package, provided they have come to rest within the state

Jèze, G. *La dette publique en France de 1914 à 1926.* Rev. de Sci. et de Légis. Finan., Jan.-Mar., 1928. Pp. 31. Reviews the various plans for amortization before Parliament and sees little hope for the adoption of any until two conditions, hitherto lacking, are present—the will to tax and reliance on expert opinion.

————————. *Aspect politique des problèmes financiers.* Rev. de. Sci. et de Légis. Finan., Jan.-Mar., 1928. Pp. 21. While it is the function of the legislators to decide what expenditures shall be made and how the necessary revenues shall be obtained, it is the function of the financial experts to point out to the legislators the probable results of various measures.

Kambe, M. *Prices and injustice in taxation.* Kyoto Univ. Econ. Rev., Dec., 1927. Pp. 14. Discusses the effect of changes in prices on the burden imposed in the case of various Japanese taxes. Justice in taxation depends upon stability in prices.

Lancaster, L. W. *Connecticut consolidates state financial control.* Nat. Munic. Rev., May, 1928. Pp. 3. The new board of finance and control takes the place of three former boards. Its administrative officer will be the commissioner of finance and control appointed for four years at a salary of $9,000.

Lutz, H. L. *The evolution of section 5219, United States revised statutes.* Bull. Nat. Tax Assoc., Apr., 1928. Pp. 7. A study of the congressional debates shows that "other moneyed capital in the hands of individual citizens" probably meant to Congress simply the stocks of state banks.

McDermott, A. M. *The over-taxation of the railroads.* Bankers Mag., Mar., 1928. Pp. 4. Suggests the appointment of a commission by the states and the federal government to study the problem.

Nesteroff, P. *La politique italienne en matière de taxation des capitaux.* Rev. d'Econ. Pol., Jan.-Feb., 1928. Pp. 12. In order to encourage saving, Italy has reduced taxes on income from capital and abolished the inheritance tax in the case of near relatives.

Nichols, P. *The valuation of industrial properties for tax purposes.* Bull. Nat. Tax Assoc., Apr., 1928. Pp. 9. In determining the fair cash value, the assessors

may get some help from a study of sales of similar property, replacement value, net income, and the selling price of shares of stock.

Perroux, F. *Remarques sur la répartition des dettes publiques en case de démembrement d'une nation.* Rev. de Sci. et de Légis. Finan., Jan.-Mar., 1928. Pp. 21. In general the public debt should be distributed among the different parts of a dismembered state in accordance with the ability of each to contribute to its repayment.

Prentice, J. S. *Canadian federal finance.* Queen's Quart., Jan.-Mar., 1928. Pp. 29. While the war increased the Dominion debt to two and one-half billions, it also brought the income tax, a very useful addition to a system which had relied previously on indirect taxes.

Rightor, C. E. *The bonded debt of 213 cities as at January 1, 1928.* Nat. Munic. Rev., 1928. Pp. 12. For the first time the figures include special assessment debts, because of the growing importance of the special assessment in municipal finances.

Saxe, M. *The threatened discrimination in banking taxation.* Bull. Nat. Tax Assoc., Mar., 1928. Pp. 10. Urges states that desire the right to classify national banks for purposes of taxation to first try the excise method which imposes a tax "measured by or according to net income" including income from all sources.

Shiomi, S. *A study in financial statistics.* Kyoto Univ. Econ. Rev., Dec., 1927. Pp. 35. Analyzes the expenditures and revenues of both the national and local governments in Japan. Local revenues are provided to a considerable degree by the addition of surtaxes to the national taxes. While the burden of national taxes has remained about the same in recent years, local taxes have increased greatly.

Waltersdorf, M. C. *Tax relief for electric street railways.* Nat. Munic. Rev., June, 1928. Pp. 5. Believes that part of the burden should be transferred to motor vehicles.

Wynne, W. H. *National debt and taxation in Great Britain.* Jour. Canadian Bankers' Assoc., Jan., 1928. Pp. 10. Reviews the findings of the British committee on the national debt and the incidence of taxation. Points out its valuable service in refuting two widespread fallacies: that income taxes are passed on in higher prices and that the industrial depression is largely the result of burdensome taxation.

Insurance

(Abstracts by F. E. Wolfe)

Black, N. C. *Method for setting up reserve to cover incurred but not reported loss liability.* Proc. Cas. Act. Soc., Nov. 18, 1927. Pp. 17. Minimum practical percentages recommended are 10 per cent for fidelity and 3.5 per cent for surety, approximately as shown by figures of 23 companies. Formulary method would place all companies on same plans.

Blanchard, R. H. *Insurance and the state.* Jour. Am. Insur., May, 1928. Pp. 3. Shows concretely the need for regulation.

Cohen, J. L. *Uberlick über den gegenwartigen Stand der Sozialversicherung in Grossbritannien.* Zeitschr. f. d. ges. Versich.-Wis., Apr., 1928. Pp. 6.

Del Vecchio, G. *Teoria economica dell' assicurazione.* Annali di Econ., Mar., 1928. Pp. 37. The economics of insurance.

Douglas, P. H. *The Russian system of social insurance.* Am. Labor Legis. Rev., June, 1928. Pp. 2.

Draper, P. M. *Social insurance and old age pensions in Canada.* Am. Labor Legis. Rev., June, 1928. Pp. 3.

Greene, W. W. *The position of the reinsurance company in the casualty business.* Proc. Cas. Act. Soc., Nov. 18, 1927. Pp. 27. Favors principle of fixed treaty and extension of reinsurance on a comprehensive plan.

Hemmer, E. *Die Exportkreditversicherung und ihre Einführung in der Schweiz.* Zeitschr. f. Schweiz. Stat. u. Volkswirtsch., 64 Jahrg., Heft 1. Pp. 26. Introduction of a special credit insurance for exports meets in no manner a need for the Swiss.

Hoffman, F. L. *The suicide record for 1927.* Spectator, May 19, 1928. Pp. 2.

Hoffman, G. W. *Crop hazards and their insurance.* Jour. Am. Insur., May, 1928. Pp. 4. Deals with hazard of drought.

Lapp, J. H. *Advantages of insurance in distributing the cost of illness and old age.* Am. Labor Legis. Rev., June, 1928. Pp. 8. Measurable economic risks with uneven incidence.

Liesse, A. *Le projet sur les assurances sociales.* L'Econ. Franç., Jan. 14, 1928. Pp. 3. Discussion of changes made by the Senate. Measure is opposed for extending risks.

Madhava, K. B. *Social insurance.* Indian Jour. Econ., Jan., 1928. Pp. 17. As at present mass of Indian workers is unorganized, a plea is made for fraternal assessment insurance, amply safeguarded.

Manes, A. *Coverages little known in America.* Jour. Am. Insur., Apr., 1928. Pp. 5. Describes in turn telegram, strike, litigation expense, property life, ship life, and machine life insurance as found in Europe.

Massmann, E. *Kreditversicherung in juristischer Betrachtung.* Zeitschr. f. d. ges. Versich.-Wis., Apr., 1928. Pp. 24.

Mukerji, D. P. *A case for social insurance in India.* Indian Jour. Econ., Jan., 1928. Pp. 21. Answers objections, and recommends voluntary group insurance, without proposing a thoroughgoing social insurance plan.

Pappalardo, G. *L'assicurazione dei crediti commerciali.* Riv. di Pol. Econ., Mar., 1928. Pp. 14. The insurance of commercial credits.

Pierson, S. *Recent legislation on business insurance.* Am. Bar Assoc. Jour., Mar., 1928. Pp. 3. Legislation has helped to eliminate uncertainty as to power of corporations to insure the lives of their officers and employees.

Raynes, H. E. *The place of ordinary stocks and shares (as distinct from fixed interest bearing securities) in the investment of life assurance funds.* Jour. Inst. Actuaries, Mar., 1928. Pp. 29. Proves with figures advantage of ordinary shares as long term investments.

Rohrbeck, W. *Das Rationalisierungsproblem in der Versicherungswirtschaft.* Zeitschr. f. d. ges. Versich.-Wis., Apr., 1928. Pp. 7. Describes development of large insurance combinations among European companies.

Sweeney, S. B. *Development of aviation insurance.* Jour. Am. Insur., May, 1928. Pp. 3. Considers rate and premium making.

Wolfe, F. E. *Fire losses and the business cycle.* Jour. Am. Insur., May, 1928. Pp. 3. Fire insurance losses and business failures have tended to vary in the same direction. But it is not true that fire loss is a function of the state of business.

Les assurances sociales. L'Econ. Franç., Mar. 10, 17, 1928. Pp. 5. Critical review of principles of proposed law and of method of budgeting and administering it. Opposes social insurance for taking no account of economic principles and adverse effects on thrift.

Cost of social insurance in Germany in 1927. Min. of Labour Gaz., May, 1928. P. 1.

France—social insurance law. Mo. Labor Rev., May, 1928. Pp. 11. Summing up of act with details of regulations for sickness, unemployment, maternity, invalidity, old age, and death benefits.

Rating moral hazard. Spectator, Mar. 22, 1928. P. 1. Gives a schedule to determine the hazard.

1927 underwriting results. Spectator, May 19, 1928. Pp. 2. 100 leading companies showed a 4 per cent underwriting profit.

Statistics

(Abstracts by Harry Jerome)

ASHBY, F. B. *An aggregative index of farm purchasing power.* Jour. Am. Stat. Assoc., Mar., 1928. Pp. 6. In appraising agricultural prosperity, indexes of prices of agricultural products should be supplemented by indexes which allow for quantities sold as well as prices.

BOWLEY, A. L. *The standard deviation of the correlation coefficient.* Jour. Am. Stat. Assoc., Mar., 1928. Pp. 4. Develops the correction necessary when normality is not assumed.

CLAUS, R. *Die Reorganisation der Statistik in Columbien.* Zeitschr. d. Preuss. Stat. Landesamts, 67 Jahrg. 2 Abt., 1927. Pp. 10. Dr. Claus gives the history of statistics in Columbia, briefly, the present statistical organization and the difficulties encountered, and the pending reorganization.

DAY, E. E. *The rôle of statistics in business forecasting.* Jour. Am. Stat. Assoc., Mar., 1928. Pp. 9. The chief contribution of statistics to business forecasting is not by mechanical forecasting by formula, but rather through the use of statistics as one tool in the more comprehensive analysis of the factors affecting business conditions.

HABERLER, G. *The meaning and use of a general price index.* Quart. Jour. Econ., May, 1928. Pp. 16. Snyder's index of the general price level is useful primarily in the study of monetary theory rather than as a measure of real wages, in a standard of deferred payments, or for the analysis of business cycles.

JENKINS, T. N. *Apparatus to facilitate the calculation of the moments of a distribution.* Jour. Am. Stat. Assoc., Mar., 1928. Pp. 3. A device to facilitate the use of prepared tables of the products of frequencies and the various powers of step deviations.

KLEZL, F. *Ein neuer Beitrag zum Preisindexproblem. Ein Entgegnung.* Zeitschr. f. Volkswirtsch. u. Sozialpolitik, Heft 10-12, 1927. Pp. 8. A spirited reply to W. Winkler's criticism of Klezl's, *The Nature of Index Numbers,* the controversy being concerned chiefly with the bearing of the relation between quantities of goods consumed to the relation between their prices.

LEVIN, N. P. *A statistical study of the economic and sociological significance of population age.* Jour. Am. Stat. Assoc., Mar., 1928. Pp. 9. A useful ratio for the study of populations is an index of "comparative basal efficiency," being a ratio of "basal productivity" to "comparative basal food requirements." These two ratios are computed, respectively, by allowing for the relative earning power and food requirements of the several age groups.

LINDER, J. *The function and place of the statistical department in a multiple line casualty company.* Proc. Cas. Act. Soc., Nov. 18, 1927. Pp. 9. Usually the statistical work should be done in a centralized statistical department rather than by the operating departments.

LOVITT, W. V. *Index number bias.* Jour. Am. Stat. Assoc., Mar., 1928. Pp. 8. Contrary to the usual statements, none of the four methods of weighting relatives which are in current use necessarily result in an upward or downward bias.

MARCH, L. *L'analyse de la variabilité.* Metron, vol. VI, no. 2, 1926. Pp. 63. A detailed algebraic analysis of the relations between the averages and dispersion of sub-groups selected in various ways from one or more primary groups.

MORITZ, R. E. *An elementary proof of Stirling's formula.* Jour. Am. Stat. Assoc., Mar., 1928. Pp. 3. An algebraic proof for Stirling's formula.

NERLOVE, S. H. and GRAHAM, W. F. *Automobile mortality table.* Jour. Pol. Econ., Apr., 1928. Pp. 3. Estimates 1928 mortality rates for automobile accidents, by age groups.

NEY, M. *De la valeur des réponses individuelles dans une enquête populaire.* Zeitschr. f. Schweiz. Stat. u. Volkswirtsch., Heft 4, 1927. Pp. 8. The author classifies the errors arising in population inquiries directed to individuals, and

examines the extent of these errors in part by a study of the census for Interlaken.

Norton, L. J. *Average variations in yields, acreage and production.* Jour. Am. Stat. Assoc., Mar., 1928. Pp. 3. For some crops, acreage changes, for others yields per acre variations, account for most of the variations in total production.

Peake, E. G. *Connection between the prices of commodities and the prices of securities.* Bankers' Mag. (London), May, 1928. Pp. 3. English data for 1882-1913 indicate that the rise in interest rates for floating money in periods of rising prices is due to increased demand for such funds, whereas the decline in prices of gilt-edged stocks is due to a decrease in demand therefor.

Thorin, P. *Organisation du dépouillement des relevés statistiques à faible nombre d'unités et l'emploi des machines.* Zeitschr. f. Schweiz. Stat. u. Volkswirtsch., Heft 4, 1927. Pp. 6. A centralized coöperative tabulating agency should be established to make available for inquiries of moderate size the advantages of machine tabulation.

Van Rijn, J. J. L. *Die Gemüse—und Frühkartoffelzucht in Italien.* Zeitschr. d. Preuss. Stat. Landesamts, 67 Jahrg., 2 Abt., 1927. Pp. 23.

Varga, S. *An expression for the asymmetrical tendency of frequency distributions.* Jour. Am. Stat. Assoc., Mar., 1928. Pp. 5. Proposes as an expression for the tendency of asymmetry in a frequency distribution the ratio of the root-mean-square of the negative deviations from the mean to the root-mean-square of the positive deviations.

Smith, J. G. *Measurement of time valuation.* Am. Econ. Rev., June, 1928. Pp. 21.

Wedgwood, J. *The influence of inheritance on the distribution of wealth.* Econ. Jour., Mar., 1928. Pp. 18. Inheritance plays an important part in the inequality of economic status, according to the rough evidence afforded by comparison of the property of 80 persons leaving large estates and the size of estates left by their predecessors. Further supporting evidence is afforded by the history of one family for ten generations.

Winkler, W. *Ein neuer Beitrag zum Preisindexproblem. Rückentgegnung.* Zeitschr. f. Volkswirtsch. u. Sozialpolitik, Heft 10-12, 1927. Pp. 9. An answer to Klezl's reply to Winkler's criticism of Klezl's theory of index numbers.

Industries and Commerce

The federal Department of Commerce has published in the series of Trade Information Bulletins: No. 545, *British Chemical Trade in 1927,* by H. S. Fox (pp. 55, 10c.); No. 546, *American Leather in Foreign Markets,* by J. Schnitzer and D. E. Longanecker (pp. 78, 10c.); No. 547, *Markets for Industrial Electrical Equipment in Western Europe* (pp. 75, 10c.); No. 548, *Exports of Electrical Equipment from Germany, 1913-1927,* by Thomas Butts (pp. 27, 10c.); No. 549, *Paper and Paper Products in Canada,* by N. S. Meese (pp. 15, 10c.); No. 550, *Installment Selling of Motor Vehicles in Europe* (pp. 42, 10c.); No. 551, *Wireless Communication in the British Empire,* by G. S. Shoup (pp. 28, 10c.); No. 552, *The Balance of International Payments of the United States in 1927,* by Ray Hall (pp. 56); No. 553, *Market for Motion Pictures in Scandinavia and the Baltic States* (pp. 25, 10c.); No. 554, *Boot and Shoe Industry and Trade of New Zealand,* by J. C. Hudson (pp. 16, 10c.); No. 555, *Surgical and Dental Instrument Trade in Australia and New Zealand,* by E. G. Pauly and J. C. Hudson (pp. 23, 10c.); No. 556, *The International Cartel Movement,* by Louis Domeratzky (pp. 61); No. 557, *Shipment of Samples and Advertising Matter to the British Empire,* by R. P. Wakefield and Henry Chalmers (pp. 53, 10c.); No. 558, *British Market for Electrical Machinery and Equipment,* by H. D. Butler (pp. 38, 10c.); No. 559, *Luxemburg: A Brief Economic Survey,* by J. E. Parks (pp. 13, 10c.); No. 560, *Commercial Readjustment in Brazil, 1927,* by M. A. Phoebus (pp. 21, 10c.); No. 561, *The Trade in Iodine* (pp. 35, 10c.).

Bulletin No. 552 listed above, on *The Balance of International Payments of the United States in 1927,* continues the series which began with an analysis of the calendar year 1922. It is stated that the methods employed in the present survey show still further refinement in many items, and that it is no longer necessary to admit a margin of $100,000,000 of possible error in the computation of any current item. The analysis is becoming more and more detailed, and furnishes substantial data for students of foreign trade and credit.

In the Trade Promotion series has appeared No. 63, *Automotive Industry and Trade of Great Britain and Ireland,* by W. M. Park (pp. 52, 15c.).

In the Textile Division of the Bureau of Foreign and Domestic Commerce has appeared a bulletin on *Cotton Fabrics and Their Uses* (pp. 36).

The statement before the House Committee on Interstate and Foreign Commerce on H. R. 10710 by C. S. Duncan, economist of the Association of Railway Executives, on the *Inland Waterways Corporation* has been printed as a pamphlet (pp. 32).

The Tariff Commission has prepared a revised edition of Part VI of *Costs of Producing Sugar Beets* relating to Idaho (pp. 80). This Commission has also issued its *Preliminary Report of the Census of Dyes and Other Synthetic Organic Chemicals* (April 4, 1928, pp. 12).

The Bureau of Railway Economics continues its series of *Commodity Prices in Their Relation to Transportation Costs* with Bulletin No. 28 on *Potatoes* (April, 1928); Bulletin No. 29, *Live Stock: Cattle and Calves, Hogs, and Sheep;* and Bulletin No. 30, *Lumber* (June, 1928).

The statement of Lloyd S. Tenny, chief of the Bureau of Agricultural Economics of the federal Department of Agriculture, submitted to the subcommittee of the Senate Committee on Agriculture and Forestry in regard to cotton prices has been mimeographed (pp. 42).

Labor

From the federal Bureau of Labor Statistics have been received the following bulletins:

No. 456, *Proceedings of the Fourteenth Annual Meeting of the International Association of Industrial Accident Boards and Commissions Held at Atlanta, Georgia, September 27-29, 1927* (February, 1928, pp. 257, xxvii, 40c.). There is also an index to previous proceedings covered by Bulletins No. 406, 432 and 456, relating to the proceedings from 1925 to 1927.

No. 457, *Union Scales of Wages and Hours of Labor, May 15, 1927* (March, 1928, pp. 253, 35c.).

No. 459, *Apprenticeship in Building Construction,* by Estelle M. Stewart (April, 1928, pp. 133, 20c.).

No. 460, *A New Test for Industrial Lead Poisoning: The Presence of Basophilic Red Cells in Lead Poisoning and Lead Absorption,* by C. P. McCord (April, 1928, pp. 33, 10c.).

The Department of Labor of the State of New York has issued Special Bulletins No. 154, *The Paper Box Industry in New York City* (January, 1928, pp. 90); and No. 155, *New York Labor Laws Enacted in 1928* (June, 1928, pp. 63).

Public Finance

Relating to public finance the following reports have been received:

Annual Report of the State Board of Tax Commissioners of the State of Indiana for the Fiscal Year ending September 30, 1927, reprinted from *Year Book* (Indianapolis, pp. 73).

Annual Report of the Commissioner of Corporations and Taxation of the Commonwealth of Massachusetts for the Year ending November 30, 1927 (Boston, pp. 217). This contains many charts illustrating the trend of taxes on real estate and tangible personal property, and expenditures not only of the state but of cities, towns and counties. The volume also contains recommendations for legislative action and court decisions relating to tax matters.

NOTES

The forty-first annual meeting of the American Economic Association will be held in Chicago, Illinois, December 26-29, with headquarters at Stevens Hotel. There will be one session on unemployment; one on banking policy as a remedial agency in business cycles; one on government control of public utilities, with special reference to electric light and power, and motor transportation; one on installment selling; and one on the Russian situation. Joint sessions will be held with the American Statistical Association and the American Association for Labor Legislation, and a round table conference with the Association of Collegiate Schools of Business. Professor James W. Bell of Northwestern University is the chairman of the committee on local arrangements.

The following persons have been chosen members of the Nominating Committee of the AMERICAN ECONOMIC ASSOCIATION: Thomas S. Adams, Chairman; Walter F. Willcox, William H. Kiekhofer, Ernest M. Patterson, and Harry A. Millis. The chairman will be glad to receive suggestions from members.

The following names have been added to the membership of the AMERICAN ECONOMIC ASSOCIATION since May 1:

Akita, K., 826 Kami-Ogikubo-Iogi-Machi Toyotama-Gun, near Tokyo, Japan.
Armstrong, W. G., Youngstown Pressed Steel Company, Warren, Ohio.
Ballinger, R. A., Virginia Agricultural Experiment Station, Blacksburg, Virginia.
Barnes, I. R., 1475 Yale Station, New Haven, Connecticut.
Campbell, J. A., Knox College, Galesburg, Illinois.
Crandall, F., National Bank Bldg., Westfield, New York.
Duncan, J. S., International House, New York City.
Fotte, E. W., 93 Lincoln St., Montclair, New Jersey.
Hamilton, C. L., 808 Merchants National Bank Bldg., St. Paul, Minneapolis.
Herzog, J. S., P. O. Box 2479, Mexico, D.F.
Hsu, Mr., Chief of Pub. and Trans. Div., Res. Div., Shui Wu Chu, Si Tang Tze Htg., Peking, China.
MacIver, R. M., 29 Claremont Ave., New York City.
McDougall, J. L., 112 Bedford Road, Toronto, 5, Ontario, Canada.
Newman, A. J., Rhode Island State College, Kingston, Rhode, Island.
Okado, K., 2006 Tomatsuri-Cho, Utsunomiya-Shi, Japan.
Reilly, W. J., University of Texas, Austin, Texas.
Riasanoff, D., Marx-Engels Institute, ul Marx-Engels 5, Moscow, Russia.
Saposs, D. J., Brookwood, Katonah, New York.
Tobin, G. W., James Madison High School, E. 25th St. at Quentin Rd., Brooklyn, New York.
Woodbury, M. G. C., 2206 Sherman Ave., Evanston, Illinois.
Yuen, L. Y., c/o Great Wall Film Co., Si Ninpo Road, Shanghai, China.

A meeting of the American Statistical Association was held in New York on May 18 to discuss the subject of "Statistics of the Insurance Business as Applied in Insurance Management, Investment, Supervision and Rate-

making." A meeting of this Association was also held in Boston on May 25 to consider the subject of "Commodity Prices." Professor Warren M. Persons spoke on the "Correlation of Weights and Relatives in the Construction of Index Numbers of Commodity Prices."

The editorial offices of Social Science Abstracts have been established in Fayerweather Hall, Columbia University.

Dr. F. Stuart Chapin has been appointed editor-in-chief for the first year. A staff of associate and assistant editors are now at work gathering material and testing the preliminary draft of a system of classification for the social sciences.

The annual summer Conference of the Social Science Research Council will be held at Hanover, New Hampshire, from August 18 to September 1. The committees scheduled to meet during this conference are those on Corporate Relations, Population, Interracial Relations and Scientific Method in the Social Sciences.

Dr. Frank A. Fetter of Princeton and Dr. Horace Secrist of the Bureau of Business Research at Northwestern University have received appointments in the new graduate department of economics which is being formed at Claremont Colleges in California. The first step will be the organization of research in economics, specializing in problems of business. A limited number of advanced students will be accepted. Dr. Kenneth Duncan, Dr. George S. Burgess and Mr. Norman T. Ness of the Pomona College faculty will be associated with Drs. Fetter and Secrist for the coming year. The seminar system will be used exclusively in this new department. The college is offering five scholarships for the coming year to students of high scholastic attainment for graduate work in economics.

Sessions of the Institute of Municipal Administration under the auspices of the University of Southern California were held at Los Angeles, August 13-18. At these meetings were brought together treasurers, auditors and assessors to discuss problems of interest in municipal finance.

The Alberta Institute of Coöperation was held at the University of Alberta, June 25-29. About 300 were in attendance. Among the subjects discussed were agricultural coöperation, the wheat pool, and coöperative marketing.

On July 1 The Brookings Institution became an operating entity, taking over the management of the activities of The Institute of Economics, The Institute for Government Research and the Robert Brookings School. The president of the new Institution is Harold G. Moulton.

Robert R. Kuczynski of the Institute staff has now in press a book entitled *The Balance of Births and Deaths.*

Edwin G. Nourse of the Advisory Council of the Brookings Institution and also chairman of the program committee of the American Institute of Coöperation presided at the meetings of the latter organization at its annual session in California.

Frank Tannenbaum has just completed a book for the Institute of Economics entitled *The Mexican Agrarian Revolution,* and has begun another which will be a survey of Porto Rico.

Richard N. Owens, formerly of Emory University, is with the Institute, devoting his attention to the subject of agriculture and business cycles.

The New England Institute of Coöperation held its second annual conference at the Massachusetts Agricultural College, June 26-29. Over 160 persons were present. The main theme of the conference was "What Can Coöperation Do for New England?" Among the papers were those presented by C. L. Christensen and A. W. McKay of the United States Department of Agriculture on the development and organization of coöperative associations; E. H. Thomson, president of the Federal Land Bank of Springfield, on credit and coöperation; C. E. Hough, of the Connecticut Milk Producers' Association, on the recent developments in coöperative marketing of milk in New England.

The United States Forest Taxation Inquiry, under the direction of Professor Fred R. Fairchild of Yale University, commenced its field studies in the Pacific Northwest in July. This organization has also begun field studies in New Hampshire.

Appointments and Resignations

Mr. Albert Abrahamson has been chosen instructor in economics at Bowdoin College.

Professor James P. Adams is to be chairman of the department of economics at Brown University beginning with the academic year 1928-29.

Mr. J. Ellwood Amos, assistant in economics at the University of Illinois, has been appointed instructor in economics at the University of Pittsburgh.

Dr. J. Fred Bell of the University of Illinois has been appointed assistant professor of economics in Syracuse University and will assume his duties at the opening of the semester in the fall.

Dr. William A. Berridge, economist for the Metropolitan Life Insurance Company of New York, has been appointed lecturer in statistics at the Graduate School of Business Administration of New York University.

Dr. Ward L. Bishop has resigned as associate in economics at the University of Illinois to accept an assistant professorship of economics at Lehigh University.

Professor Theodore H. Boggs, head of the department of economics, University of British Columbia, gave courses in economics during the summer session at Stanford University.

Miss Elizabeth Boody has resigned her position of assistant professor of economics at Vassar College.

Dean R. P. Brooks of the School of Commerce, University of Georgia, has been appointed director of the Bureau of Business Research at the same university.

Mr. Charles E. Calhoun has been appointed instructor in business administration at the University of Washington for the year 1928-29, to teach sections in elementary economics.

Dr. Merton K. Cameron of the University of Oregon has accepted an appointment for one year as head of economics at the University of Hawaii. He expects to return to Oregon at the expiration of his leave of one year.

Professor Alzada Comstock of Mt. Holyoke College has been granted a semester's leave for the first half of 1928-29 for a study of land reform laws which she will begin in Estonia.

Professor W. J. H. Cotton of Duke University has been granted a sabbatical leave of absence for the academic year 1928-29. He will spend most of the year in travel and research in Italy, Germany, France, and England, giving especial attention to the study of labor problems.

Professor John H. Cover, director of the Bureau of Research at the University of Pittsburgh, will be at the University of Chicago beginning the fall quarter, conducting a research analysis of the packing industry. This study will include a development of methodology for studying an industry as a unit. Professor Cover will retain supervision of the Bureau of Business Research and the department of statistics at the University of Pittsburgh.

Mr. Kenneth Dameron has resigned as instructor in economics in the School of Commerce, Accounts and Finance at New York University to become director of research for the National Association of Retail Clothiers and Furnishers, Chicago.

Professor James Q. Dealey, head of the department of political and social science at Brown University, retired in June, 1928.

Mr. Paul A. Dodd of the department of finance of the Wharton School, University of Pennsylvania, has joined the staff in economics of the University of California at Los Angeles, as instructor in economics.

Assistant Professor G. A. Elliott of the University of Manitoba has been appointed assistant professor of economics at the University of Chicago, where he will work in the field of statistics.

Professor Elmer D. Fagan of the department of economics, University of Southern California, has been appointed acting associate professor of economics at Stanford for the year 1928-29.

Dr. Kenneth Field of the University of Illinois has been appointed assistant professor of economics in the University of Colorado, and will assume his duties in September.

Mr. Herbert Gane has accepted a position as instructor in economics at Morningside College, Iowa.

Professor Henry Brayton Gardner, head of the department of economics at Brown University, retired in June, 1928, and was appointed professor emeritus.

Mr. Richard A. Girard, formerly with the Alexander Hamilton Institute, has been appointed assistant in economics at the School of Commerce, Accounts and Finance at New York University.

Professor William H. Glasson of Duke University gave courses in money and in public finance at the summer session of the University of Virginia.

Mr. Charles A. Glover has been appointed assistant professor of economics at Brown University for the academic year 1928-29.

Mr. L. Wallis Graves has been appointed instructor in business administration at the University of Washington for the year 1928-29, to teach sections in elementary economics.

Mr. Robert M. Haig, professor of business administration at Columbia University, delivered an address on "Some Problems in the Revision of the

California System of Taxation," at the Institute of Public Affairs held at the University of California at Los Angeles in July. Professor Haig is economist for the California State Tax Commission.

Professor Walter H. Hamilton goes from Robert Brookings Graduate School to the Law School of Yale University.

Mr. Richard A. Harvill, during the academic year 1927-28 a member of the staff of the economics department at the Mississippi Agricultural and Mechanical College, has been appointed an instructor in economics at Duke University for the coming academic year.

Mr. E. J. Hawk of the University of Virginia, has been appointed professor of economics at the Birmingham-Southern College, Birmingham, Alabama.

Professor Jacob H. Hollander of Johns Hopkins University will give a graduate course at Princeton University in the history of economic thought during the first term of 1928-29.

Professor Henry F. Holtzclaw of the University of Kansas is offering courses in economics at the Peabody Teachers' College, Nashville, Tennessee. During the first semester he is on leave of absence to teach courses in statistics and economics at the University of Illinois.

Professor Calvin B. Hoover of Duke University gave courses in money at the recent summer session of the University of North Carolina.

Professor Stanley E. Howard of Princeton University is on leave of absence for the first term 1928-29 and is studying abroad.

Mr. Ralph Hower, at present Kansas Rhodes scholar, Oxford, England, will become an instructor in economics at the University of Kansas next year.

Mrs. Ruth Gillette Hutchinson has been appointed assistant professor of economics in Vassar College.

Mr. James McPherson Jarrett has been appointed instructor in economics at Princeton University.

Dr. Henrietta Cooper Jennings has been appointed professor of economics and sociology at Wilson College, Chambersburg, Pennsylvania.

Mr. G. F. Johnson has been appointed adjunct professor of finance at the University of Georgia.

Dr. Willford I. King, professor of economics and statistics, School of Commerce, Accounts and Finance, New York University, has been appointed a member of the Advisory Committee on the United States Census, by the American Statistical Association.

Professor G. A. Kleene of Trinity College, Hartford, has been granted a leave of absence for the year 1928-29 and will spend most of the time in Europe.

Miss Mildred Lamb will serve as professor of commerce at McPherson College, McPherson, Kansas, during the coming academic year.

Mr. Richard T. Lapiere, after a year in the London School of Economics, has returned to Stanford University to give courses in sociology.

Professor S. E. Leland of the University of Kentucky has been appointed associate professor of economics at the University of Chicago.

Professor J. L. Leonard of Wabash College will have charge of Professor G. A. Kleene's classes at Trinity College, Hartford, during the coming academic year.

Dr. A. F. Lucas of the department of economics and sociology of Clark University taught in the summer school of the University of the South.

Professor Harvey L. Lutz, formerly of Stanford University, has been appointed professor of public finance at Princeton University.

Mr. Ward C. Macy, a member of the faculty of Coe College, Cedar Rapids, is spending a year in research at Stanford University.

Mr. Paul E. Malone is to be assistant instructor in economics at the University of Kansas next year.

Mr. J. Clyde Marquis of the Bureau of Agricultural Economics of the Federal Department of Agriculture, will assist in a three months' study of agricultural marketing conditions in Germany.

Dr. Charles F. Marsh of the University of Illinois has been made assistant professor of economics in the American University at Washington, D.C.

Dr. J. A. Maxwell taught in the summer school at Clark University.

Mr. Harry E. Miller has been appointed associate professor of political economy on the Eastman Foundation at Brown University beginning with the academic year 1928-29.

Mr. Earl L. Moser, assistant professor of economics at the University of Kansas, has resigned to accept a position as associate professor of finance at the University of Oregon.

Mr. I. T. Musser, who studied last year at the University of Paris, and who has recently received his doctor's degree at the University of Virginia, has been appointed research associate in finance in the Institute for Research in the Social Sciences at the University of Virginia.

Mr. Stephen J. Navin, assistant in economics in the University of Illinois during the past two years, has been made instructor in economics at Dartmouth College and will begin his work there in September.

Assistant Professor John Neff of Swarthmore College has been appointed assistant professor of economics at the University of Chicago, where he will work in the field of European economic history. He will spend the summer abroad gathering further material for his study on the history of the English coal industry.

Mr. Herbert P. Negus has been appointed assistant in economics and statistical assistant in the Bureau of Business Research at Brown University for the academic year 1928-29.

Mr. Charles M. Nicholson has been appointed instructor in the School of Business Administration at the University of Idaho.

Mr. Charles Norman of Stanford University has been appointed assistant professor of economics at the University of Oregon for the year 1928-29.

He will give work in the history of economic thought and assist in giving the new survey course introductory to social sciences in general.

Mr. Thomas L. Norton, formerly of the Tuck School of Dartmouth College and of Brown University, has been appointed assistant professor of economics in the University of Buffalo.

Mr. Niles A. Olsen has been appointed chief of the Bureau of Agricultural Economics.

Mr. Richard N. Owens, who for the past three years has been with Emory University, is with the Institute of Economics this summer where he is working on the subject of agriculture and business cycles. At the opening of the fall term he will join the faculty of George Washington University as first professor of the newly established course in accounting.

Professor H. H. Preston has been granted a year's leave of absence to teach at Dartmouth College for the year 1928-29.

Mr. Harry L. Purdy has been appointed instructor in business administration at the University of Washington for the year 1928-29, to teach sections in elementary economics.

Professor Charles N. Reynolds, head of the department of economics, University of Hawaii, has been appointed assistant professor of sociology at Stanford University for the year 1928-29.

Professor E. A. Ross will be on leave of absence from the University of Wisconsin during 1928-29. He is a member of the teaching staff of the Floating University.

Mr. Charles H. Sandage, assistant professor of economics at Simpson College, Indianola, Iowa, has accepted a position as instructor in accounting at the University of Kansas.

Mr. Emerson P. Schmidt of Wisconsin University has been appointed assistant professor of economics at the University of Oregon. He will conduct courses in labor and in public utilities during the absence of Drs. Wood and Cameron.

Mr. Joseph H. Senturia, instructor in economics at Washington University, St. Louis, has been appointed an assistant in economics in the School of Commerce, Accounts and Finance, New York University.

Mr. W. Kenneth Sharkey has been appointed assistant in economics at Brown University for the academic year 1928-29.

Mr. Verne F. Simons, at present instructor in accounting at the University of Kansas, has accepted a graduate fellowship in economics at the University of Chicago.

Dr. Walter E. Spahr, formerly associate professor of economics and acting chairman of the department at the School of Commerce, Accounts and Finance, New York University, has been promoted to the rank of professor of economics and chairman of the department.

Mr. Julius H. Spalding, who has been engaged in graduate study at Columbia University, has been appointed an instructor in economics in the School of Commerce, Accounts and Finance, New York University.

Mr. Glenn W. Sutton has been appointed assistant director of the Bureau of Business Research, University of Georgia.

Mr. Joseph H. Taggart, of Lehigh University, has accepted a position as assistant professor of business finance at the University of Kansas.

Mr. W. Bayard Taylor of Rockford College has accepted a position as associate professor of finance at the University of Kansas.

Mr. Lloyd S. Tenny, chief of the Bureau of Agricultural Economics of the United States Department of Agriculture, has resigned to accept a position with the Associated California Fruit Industries, Inc.

Professor Charles S. Tippetts of the University of Iowa will have charge of Professor H. H. Preston's courses at the University of Washington for the year 1928-29.

Mr. Paul M. Titus, who has been an instructor at Oberlin College this year, has been appointed instructor in economics at Princeton University.

Assistant Professor R. W. Valentine, who has been absent on leave during the past year, has resigned his position at the University of Illinois and accepted an appointment in the research department of the investment banking firm of Halsey, Stuart & Company, at Chicago.

Dr. John V. Van Sickle, assistant professor in the department of economics at the University of Michigan, has joined the staff of the Social Science Research Council as fellowship secretary in charge of the Council's research fellowships in the social sciences.

Professor Roger H. Wells, who has been in Germany for the past year studying German city governments on a Guggenheim Fellowship, is returning in October to resume his work at Bryn Mawr College.

Dr. Charles R. Whittlesey has been appointed instructor in economics at Princeton University.

Dr. D. W. Willard of the department of economics and sociology at Clark University went to Geneva in the summer to study the League of Nations, as a scholar of the International Institute of Columbia Teachers' College.

Dr. Louis A. Wood, assistant professor of economics at the University of Oregon, will be absent for a year while pursuing research work at Yale. He has been granted the Sterling fellowship and will investigate labor conditions in the service of large railway corporations.

Dr. William H. Wynne, assistant professor of economics, Williams College, is giving a course in the development of economics in the summer session of New York University.

Mr. James Merle Yowell has accepted an assistant instructorship in the College of Business Administration at the University of Nebraska.

TWENTY-FIFTH LIST OF DOCTORAL DISSERTATIONS IN POLITICAL ECONOMY IN PROGRESS IN AMERICAN UNIVERSITIES AND COLLEGES

Students whose period of continuous non-residence exceeds three years are omitted from the list. The last date given is the probable date of completion.

The first list of this kind was dated January 1, 1904, and was sent to all members, but not regularly bound in the publications. The subsequent lists have appeared in the publications as follows:

Second list, 1905, in third series, vol. vi, p. 737.
Third list, 1906, in third series, vol. vii, no. 3, supplement, p. 43.
Fourth list, 1907, in third series, vol. viii, no. 2, supplement, p. 42.
Fifth list, 1908, in the *Bulletin* for April, 1908, p. 69.
Sixth list, 1909, in the *Bulletin* for April, 1909, p. 16.
Seventh list, 1910, in the *Bulletin* for March, 1910, p. 12.
Eighth list, 1911, in the Review for March, 1911, p. 212.
Ninth list, 1912, in the Review for June, 1912, p. 519.
Tenth list, 1913, in the Review for June, 1913, p. 527.
Eleventh list, 1914, in the Review for June, 1914, p. 524.
Twelfth list, 1915, in the Review for June, 1915, p. 476.
Thirteenth list, 1916, in the Review for June, 1916, p. 499.
Fourteenth list, 1917, in the Review for June, 1917, p. 485.
Fifteenth list, 1918, in the Review for June, 1918, p. 459.
Sixteenth list, 1919, in the Review for June, 1919, p. 433.
Seventeenth list, 1920, in the Review for September, 1920, p. 692.
Eighteenth list, 1921, in the Review for June, 1921, p. 388.
Nineteenth list, 1922, in the Review for June, 1922, p. 380.
Twentieth list, 1923, in the Review for September, 1923, p. 571.
Twenty-first list, 1924, in the Review for September, 1924, p. 601.
Twenty-second list, 1925, in the Review for September, 1925, p. 593.
Twenty-third list, 1926, in the Review for September, 1926, p. 556.
Twenty-fourth list, 1927, in the Review for September, 1927, p. 574.

The present list specifies doctoral dissertations completed and accepted by the various universities, and in cases where a publishing company was reported, this has been given. Titles not marked "completed" are assumed to be still in preparation.

Theory and Its History

Erich Andrew Ahrens, A. B., Rochester, 1921. The sociology of Troelsch. 1929. *Chicago.*

Irving Allen, A. B., Michigan, 1914; A. M., Indiana, 1925. Psychology in economic theory. 1928. *Columbia.*

H. H. **Anderson**, B. A., Iowa State Teachers' College, 1923. Social and economic ideas in Daniel Defoe. 1928. *Chicago.*

R. J. **Andrus**, A. B., University of Redlands, 1925; M. A., California, 1926. Theories of consumption in communistic Utopias and communistic societies, 1800-1850. 1928. *California.*

Karl Worth Bigelow, A. B., Clark, 1920. The early history of the entrepreneur concept. 1929. *Harvard.*

Roy C. Cave, A. B., University of Washington, 1923; M. A., 1924. Social stratification and market price. 1928. *California.*

NAI-TUAN CHAO, A. M., Columbia, 1924. Richard Jones: the founder of the English Historical School in Political Economy. 1928. *Columbia.*

T. CHIN, A. B., St. John's University, Shanghai, 1919; A. M., Columbia, 1922. John Locke's monetary theory. 1928. *Columbia.*

MARY CHANDLER COIT, A. B., Radcliffe, 1917; A. M., 1925. Velocity as an independent variable in the equation of exchange. 1928. *Radcliffe.*

GEORGE REGINALD CROSBY, A. B., Harvard, 1922; A. M., Columbia, 1925. A study of John Stuart Mill. 1928. *Columbia.*

RICHARD VINCENT GILBERT, S. B., Harvard, 1923; A. M., 1925. Theory of international trade. 1929. *Harvard.*

EDWARD EVERETT HALE, B. A., Texas, 1920; M. A., Wisconsin, 1923. History of theories of economic differentials. 1929. *Wisconsin.*

ALTON R. HODGKINS, A. B., Bates, 1911; A. M., American University, 1926. Pedro Rodriguez Campomanes, a Spanish economist of the eighteenth century. 1929. *Johns Hopkins.*

EDGAR AUGUSTUS JEROME JOHNSON, S. B., Illinois, 1922; A. M., Harvard, 1924. History of American economic thought in the seventeenth century. 1929. *Harvard.*

FRED BUNYAN JOYNER, A. B., Southern, 1916; A. M., Chicago, 1920. David A. Wells and his work. 1928. *Chicago.*

A. D. H. KAPLAN, B. S., New York University, 1913; M. A., Denver, 1923. Henry C. Carey. 1929. *Johns Hopkins.*

ANGIE GRAHAM KIMBERLAND, A. M., Columbia, 1925. Economic theories of Alexander Hamilton. 1929. *Columbia.*

JOHN LAURES, Abitur (Germany), 1913; A. B., Woodstock, Md., 1925; A. M., 1925. The political economy of Juan de Mariana. 1928. *Columbia.* Accepted. (Published by Fordham University Press.)

EDWARD ERWIN LEWIS, A. B., Columbia, 1924; A. M., 1925. Doctrine of imputation. 1928. *Columbia.*

L. A. MORRISON, A. B., University of British Columbia, 1920; M. A., 1922. Costs and prices in economic theory. 1928. *California.*

WALTER A. MORTON, B. A., Michigan, 1923; M. A., 1924. The formation of capital. 1927. *Wisconsin.* Completed.

REDVERS OPIE, B. Com., University of Durham, England, 1919; A. M., Harvard, 1927. John Stuart Mill: a re-examination. 1928. *Harvard.* Completed.

EDGAR Z. PALMER, B. A., Swarthmore, 1919. The definition of income and the comparison of class incomes. 1928. *Wisconsin.* Completed.

LAWRENCE PASEL, A. B. and LL. B., Illinois Wesleyan, 1922; A. M., Columbia, 1923. Charles Devenant, economist. 1929. *Columbia.*

ROBERT D. PATTON, B. S. in B. A., Ohio State, 1922; M. A. A., 1926. The nature of the competitive process. 1930. *Ohio State.*

MARGARET PRYOR, B. A., Texas, 1916; M. A., 1918. The place of consumption in economic theory. 1927. *Wisconsin.* Completed.

EUGENIA LEA REMELIN, A. B., Cincinnati, 1918; A. M., 1923. Empathy as a sociological concept. 1929. *Chicago.*

Blanche Schnitzer, A. B., Wellesley, 1924; A. M., Columbia, 1925. The psychology of consumers' demand. 1928. *Columbia.*

May Wood Simons, Ph. B., Chicago, 1906; A. M., Northwestern, 1910. The history of American economic thought prior to 1837. 1929. *Northwestern.*

Overton Hume Taylor, A. B., Colorado, 1921. The idea of natural law as it appears in Adam Smith and his contemporaries. 1928. *Harvard.* Completed.

Caroline Whitney, A. B., Vassar, 1922. Influence of price changes on demand stocks. 1928. *Columbia.*

Theodore Otte Yntema, A. B., Hope, 1921; A. M., Illinois, 1922. A mathematical restatement on the theory of equilibrium in international trade. 1928. *Chicago.*

Wen Peh Yuen, B. A., Fuh Tan University, 1920. The economics of Taoism and related philosophies. *New York University.*

Economic History and Geography

Ruth W. Ayres, A.B., Radcliffe, 1925; A.M., 1927. A study of the problems arising out of American ownership of oil properties in Mexico. 1929. *Robert Brookings.*

G. W. Barbour, A. B., Ohio, 1918; A. M., Chicago, 1920. Economic development of Cleveland, Ohio. 1928. *Chicago.*

Thomas C. Blaisdell, Jr., A. B., Penn State, 1916; A. M. Columbia, 1922. The development of the Industrial Revolution in China. 1928. *Columbia.*

Marjorie Clark, A. B., University of California, 1924; M. A., 1925. History of revolutionary syndicalism in France, 1910-1927. 1928. *California.*

Samual Richardson Davenport, A. B., Morningside, 1926. The social and economic history of Ohio since 1860. 1928. *Chicago.*

Julian Smith Duncan, A. B., Emory University, 1918; A. M., 1919; B. D., 1924. Economic aspects of international relations, particularly United States and Latin America. 1929. *Columbia.*

J. Harold Ennis, A. B., Cornell College, 1925; A. M., Columbia, 1926. Policies of Dallas in the early financial history of the United States. 1928. *Columbia.*

Michael Florinsky, Gymnasium, Kief, 1913; Artillery School, 1915. Contribution of Sir Paul Vinogradoff to economic history. 1929. *Columbia.*

Hsien Ding Fong, B. S., New York University, 1924. Types of industrial organization in England about 1840. 1928. *Yale.*

Margaret Randolph Gay, A. B., Radcliffe, 1922; A. M., 1923. The statute of artificers and its administration, 1503-1813. 1929. *Radcliffe.*

Evelyn Gibson, A. B., Mt. Holyoke, 1920; A. M., Radcliffe, 1921. The framework knitting industry in England from the sixteenth to the nineteenth century. 1929. *Radcliffe.*

Leland J. Gordon, Ph. D., Pennsylvania, 1928. Economic relations of the United States and Turkey. Accepted.

Carmen Haider, Abitur, Berlin; A. M., Columbia. Fascist solution of the problem, "Capital and Labor." 1928. *Columbia.*

Abram L. Harris, Jr., A. B., Virginia Union; A. M., Pittsburgh. Economic forces in negro history. 1928. *Columbia.*

William A. Hartman, B. S., Wisconsin, 1923. "Grub-stake" stage in colonization and "shot-gun" types of land settlement in northern Wisconsin. 1929. *Wisconsin.*

Milton Sydney Heath, A. B., Kansas, 1920; A. M., Harvard, 1924. The history of the Southern Railway: a study in economic development of the South since the Civil War. 1929. *Harvard.*

Lester M. Jones, B. A., Baker, 1909; M. A., Columbia, 1913. Recent humanitarian and reform activities of the American Quakers. 1927. *Wisconsin.* Completed.

Oscar Arvle Kinchen, A. B., Oklahoma, 1916; A. M., 1920. The economic development of Arkansas. 1928. *Chicago.*

Frederic Chapin Lane, A. B., Cornell, 1921; M. A., Tufts, 1922. The Mediterranean merchantman as a carrier, 1400-1700. 1929. *Harvard.*

John Alexander Levandis, B. S., Delaware, 1921; A. M., Columbia, 1922. The finances of Greece and the international financial commission. 1929. *Columbia.*

Paul Lewinson, Ph. D., Robert Brookings, 1927. Race, class and party: a history of negro suffrage and white politics in the South. Accepted.

Shu Mong Ling, B. S., Illinois, 1922; M. S., 1924. China's foreign indebtedness. 1927. *Illinois.*

Leah Lipsky, A. B., Hunter, 1922; A. M., Columbia, 1923. Origin and growth of social democratic party in Russia. 1928. *Columbia.*

Hope Henry Lumpkin, B. A., South Carolina, 1904; B. D., University of the South, 1907; M. A., Wisconsin, 1922. The social and economic ideas of the English church fathers of the sixteenth century. 1927. *Wisconsin.* Completed.

Norman L. Meyers, B. A., Minnesota, 1926. American colonial law. 1928. *Robert Brookings.*

Edmund Arthur Moore, A. B., Minnesota, 1924; A. M., 1925. Third party movements and their economic background in Minnesota since 1858. 1928. *Chicago.*

Jean Elizabeth Murray, A. B., Saskatchewan, 1922; A. M., 1923; A. M., Toronto, 1924. The relation of the fur trade in New Netherlands and New York to that of New France to 1713. 1928. *Chicago.*

Robinson E. Newcomb, A. B., Oberlin, 1924; A. M., 1924. History of Liberia. 1928. *Robert Brookings.*

Gustav Peck, Ph. D., Robert Brookings, 1927. The economics of a rising industrialism. Accepted.

J. E. Ricks, A. B., Utah, 1912; A. M., Chicago, 1920. Forms and methods of settlement in Utah. 1928. *Chicago.*

W. Harry Snyder, B. A., Ursinus, 1923; M. A., New York University, 1924. American investment in the non-contiguous countries of the Caribbean and its effect upon the international relations of the United States and that area. *New York University.*

Peter Theodore Swanish, B.S., Minnesota, 1921; M.B.A., Northwestern, 1923. The financial history of Russia since 1914. 1928. *Chicago.*

George Rogers Taylor, Ph.B., Chicago, 1921. A study of economic conditions in the United States, 1789-1815. 1928. *Chicago.*

Woodlief Thomas, B.S., Pennsylvania, 1922. The increased productivity of American industry. 1927. *Robert Brookings.*

T. E. Thompson, A.B., Cornell College, 1915; A.M., Columbia, 1917. An industrial survey of Columbus, Ohio. 1929. *Ohio State.*

F. Y. Tsui, B.S., Nankai, 1924; B.S., M.S., Columbia, 1925. Financial relations between the central government of China and Mongolia. 1928. *Columbia.*

Roy N. Veatch, B.A., Oregon, 1922. Industrialism in China, with special consideration of the coming struggle for control of the character and direction of its growth. 1929. *Robert Brookings.*

Earle Micajah Winslow, A.B., Penn College, 1920; A.M., Iowa, 1922. Some aspects of economic imperialism. 1929. *Harvard.*

Alfred J. Wright, A.B., Michigan, 1922; A.M., Pennsylvania, 1925. Some adjustments of industry in the Miami Valley. 1929. *Pennsylvania.*

Agriculture, Mining, Forestry, and Fisheries

Ben Finley Alvord, B.S., Illinois, 1923; M.S., 1924. Shifts in agricultural production in the Red River Valley in Minnesota. 1929. *Minnesota.*

Walter W. Armentrout, B.S.A., Tennessee, 1916; M.A., Wisconsin, 1925. Economic aspects of county livestock shipping organization. 1929. *Minnesota.*

Edgar Arneson, B.S., Wisconsin, 1925; M.S., Ohio State, 1928. Coöperative marketing of livestock. 1929. *Ohio State.*

Robert Otis Bausman, B.S., Purdue, 1914. The tenantry system in the state of Delaware. 1929. *Cornell.*

John Benedict Bearnson, B.S., Utah Agricultural, 1914; A.M., Stanford, 1917. The direct marketing of livestock. 1928. *Chicago.*

Abraham Jacobus Beyleveld, B.Co., Stellenbosch, 1925. Crop reporting in various countries. 1928. *Cornell.*

Albert Gain Black, Ph.D., Minnesota, 1927. Wealth and income of the farmers of the United States.

Maurice Chester Bond, B.S., Vermont, 1920; M.S., 1927. The marketing of milk through ice cream. 1928. *Cornell.*

Charles Ward Boyce, B.A., Michigan, 1914; M.A., American University, 1927. Correlation of stumpage prices and timber growing. 1929. *Yale.*

Roland Franklin Bucknam, B.S., Cornell, 1914. Economic study of rural electrification in New York State. 1929. *Cornell.*

Martin Paul Catherwood, B.S., Illinois, 1926; M.S., 1927. A farm management study of the New York milk shed. 1929. *Cornell.*

Donald R. Cowan, B.A., Queen's, 1917; M.A., Toronto, 1918. An analysis of the factors determining the territorial distribution of the sale of dairy produce. 1929. *Minnesota.*

S. Drutzu, A.B., Roumania, 1912; M.E., certificate, Berlin, 1918. Government aid for the American farmer. 1929. *Columbia.*

Jan Heystek du Plessis, A.B., Transvaal, 1925. Marketing South African oranges. 1929. *Cornell.*

Otis D. Duncan, A.B., East Texas State Teachers' College, 1924; M.S., Agricultural and Mechanical College of Texas, 1926. Some internal and external factors

affecting the growth and decline of selected rural village communities. 1930. *Minnesota.*

Moses Gale Eastman, B.S., New Hampshire, 1913; M.S.A., Cornell, 1916. Roadside markets in New Hampshire. 1928. *Cornell.*

Russell C. Engberg, Ph.D., Columbia, 1927. Industrial prosperity and the farmer. Accepted. (Published by Macmillan Company, New York.)

Robert H. Engle, B.S., Illinois, 1917; M.S., 1925. A census of the agricultural industry in the Chicago region. 1928. *Chicago.*

James Gilbert Evans, A.B., Simpson, 1921. The history of agriculture in Illinois. 1929. *Chicago.*

Feramorz Young Fox, A.B., Utah, 1906; M.L., California, 1912. Land policy of the Mormon church. 1929. *Northwestern.*

Lewis Farr Garey, B.S., Nebraska, 1914; A.M., 1915. Farm organization in northwestern Minnesota. 1929. *Cornell.*

Clifford William Gilbert, B.S., Cornell, 1916; M.S., 1926. An economic study of tractors and trucks on farms in New York State. 1928. *Cornell.*

Joseph S. Gould, B.A., Clark, 1921; M.A., 1922. Trends in the location and size of petroleum refineries and the technical and economic factors influencing them. 1929. *Robert Brookings.*

Erwin Graue, B.S., Cornell, 1924. The development of manufacturing industries in relation to the relatively increased demand for agricultural products and the elasticity of that demand. 1928. *Cornell.*

Thomas William Grindley, B.A., Alberta, 1923; B.S., 1925; M.S., Minnesota, 1927. The effects of single-crop agriculture in western Canada. 1929. *Minnesota.*

Norman Milligan Guy, A.B., Mt. Allison, 1912; A.M., 1913; A.M., Harvard, 1924. The English agricultural laborers' movement and the churches. 1929. *Harvard.*

Conrad Harold Hammar, B.S., Minnesota, 1924. The valuation of the cut-over land of the Lake States. 1929. *Minnesota.*

James Schoffner Hathcock, Ph.D., Cornell, 1927. Practices and costs of cotton gin operation in North Central Texas. Accepted.

Julius Hendel, Ph.D., Minnesota, 1928. Cash and future price of wheat in the Minneapolis market for hard spring wheat. Accepted.

Arnold Frederick Hinrichs, B.S., Minnesota, 1922. A study of the economic factors producing differences in the organization of German agriculture and the agriculture of the parts of the United States having similar climatic conditions. 1929. *Minnesota.*

Budd Alexander Holt, B.A., Minnesota, 1920; M.A., 1922. Analysis of potato price differentials. 1929. *Minnesota.*

Leander D. Howell, B.S., Texas A. and M., 1921; M.S., 1922. The white farmer of the South. 1929. *Wisconsin.*

Henry F. James, Ph.D., Pennsylvania, 1927. Agricultural industry of southeastern Pennsylvania. Accepted. (Published by the Geographical Society of Philadelphia, March, 1928.)

Ward C. Jensen, B.S., California, 1917; M.S., Cornell, 1920. Farm organization and cost of production on cotton farms in Anderson County, South Carolina. 1928. *Wisconsin.*

OSCAR B. JESNESS, B.S.A., Minnesota, 1912; M.S., 1924. The marketing of tobacco. 1928. *Minnesota.*

DOROTHY LAMPEN, A.B., Carleton, 1926. Economics of federal reclamation. 1929. *Johns Hopkins.*

ROSS L. LARGE, B.A., Denver, 1912; M.A., Wisconsin, 1913. The beet sugar industry. 1930. *Wisconsin.*

FRED FOUSE LININGER, B.S., Penn State, 1917; M.S., Cornell, 1926. The influence of the Philadelphia marketing plan on milk production and distribution. 1928. *Cornell.*

ARTHUR REGINALD MARSDEN LOWER, B.A., Toronto, 1914; M.A., 1923; A.M., Harvard, 1926. Canadian lumber trade. 1929. *Harvard.*

JOHN CHAMBERS MCDOWELL, Ph.D., American University, 1927. Our future food supply and the dairy cow. Accepted.

THEODORE B. MANNY, B.A., Illinois, 1918; M.A., Wisconsin, 1922. Basis of organization of farmers' organizations. *Wisconsin.*

WILLIAM RUSSELL MAXWELL, B.A., Dalhousie, 1920; M.A., Harvard, 1921. The land policy of the Canadian federal government. 1930. *Harvard.*

WILLIAM GUY MEAL, B.S., Cornell, 1923. Lettuce and onion production and marketing. 1929. *Cornell.*

CHARLES HENRY MERCHANT, B.S., Cornell, 1920; M.S., 1922. Production and marketing of apples in Oxford County, Maine. 1928. *Cornell.*

ELMER HIRAM MERENESS, B.S., Cornell, 1926. Farm management study of fifty-five farm businesses in Genesee County, New York. *Cornell.*

KEITH ANDERSON HOPE MURRAY, B.S., Edinburgh, 1925. Agricultural prices in Great Britain. 1929. *Cornell.*

JOHANN CHRISTIAN NEETHLING, Ph.D., Cornell, 1928. An economic study of dairy farming in Chenango Valley, New York. Accepted.

JAN GABRIEL PEROLD, B.A., University of Cape of Good Hope, 1899; M.A., Toronto, 1926. Labor and gold mining industry on the Witwatersrand. 1928. *Toronto.*

JOHN U. NEF, Ph.D., Robert Brookings, 1927. Coal in British history. Accepted.

GEORGE MARTIN PETERSON, Ph.D., Minnesota, 1927. The problem of the agricultural surplus in the United States. Accepted.

GEORGE AUGUSTUS POND, Ph.D., Cornell, 1927. A study of dairy farm organization in southeastern Minnesota. Accepted.

WHITON POWELL, A.B., Cornell, 1924; M.S., 1925. Study of factors affecting costs of operation of retail feed stores. 1928. *Cornell.*

JOSEPH RHOADES, B.S., Minnesota, 1918; M.S., 1920. Factors affecting the price of beef cattle. 1929. *Minnesota.*

WILLIAM F. ROFKAR, B.S., Ohio State, 1922; M.A., 1927. Analysis of the production and merchandising of apples. 1929. *Ohio State.*

HAROLD B. ROWE, B.S., Iowa State College, 1923. A plan for federating farmers' elevators in the spring wheat area. 1929. *Minnesota.*

DAVID ROZMAN, A.B., Wisconsin, 1923. The comparative study of land tenure in the United States and foreign countries. 1929. *Northwestern.*

Geoffrey Seddon Shepard, B.S.A., Saskatchewan, 1924; S.M., Iowa, 1925. Corn and hog price stabilization in the corn belt. 1929. *Harvard.*

Philip Holcomb Stephens, B.S., Nebraska, 1920; M.S., Illinois, 1926. An economic study of dairy farming in Chenango County, New York. 1928. *Cornell.*

H. M. Stoker, B.S., Pretoria, 1927. Textiles. *Cornell.*

Leo C. Studness, A.B., Minnesota, 1918; A.M., Columbia, 1921. The farm labor problem in North Dakota. 1928. *Columbia.*

Frank Tannenbaum, Ph.D., Robert Brookings, 1927. The Mexican agricultural revaluation. Accepted.

Clifford Curtis Taylor, Colorado Agricultural, 1917; S.M., Iowa State College, 1923. Economics of agricultural coöperation. 1929. *Harvard.*

John Wills Taylor, Ph.B., Wisconsin, 1911; A.M., 1925. History of the leasing of the public lands. 1928. *Chicago.*

William Henry Ten Haken, A.B., Hope, 1917; A.M., Wisconsin, 1924. A study of land ownership and tenancy in Knox County, Illinois. 1929. *Northwestern.*

John Leslie Tennant, Ph.D., Cornell, 1928. The economic relationships between roads and agriculture. Accepted.

Eleazer Tetreau, B.A., Hamline, 1915; M.A., Wisconsin, 1920. The effect of tenancy on rural institutions. 1929. *Wisconsin.*

Mather Francis Thurston, Ph.D., Cornell, 1928. The outlook for market hay in New York State. Accepted.

Volodimir P. Timoshenko, Ph.D., Cornell, 1927. Wheat prices and world wheat market. Accepted.

James M. Tinley, B.Econ., University of South Africa, 1923. Marketing flue cured tobacco, with special reference to the operations of the Tobacco Growers Coöperative Association. 1928. *Minnesota.*

Charles Ketchum Tucker, B.S., Cornell, 1922; M.S., 1925. Country milk plants. 1928. *Cornell.*

Lawrence Moore Vaughan, B.S., Cornell, 1923. Economic study of abandoned farm areas in southern New York. 1928. *Cornell.*

Edmund Ellsworth Vial, Ph.D., Cornell, 1927. Prices of fertilizer materials and factors affecting the fertilizer tonnage. Accepted.

Frank Josiah Walrath, Ph.D., Cornell, 1927. A history of the agriculture of Tompkins County, New York. Accepted.

Fayette S. Warner, C.E., Rensselaer Polytechnic Institute, 1921; M.B.A., Pennsylvania, 1924. Mineral tonnages in their future relation to the St. Lawrence waterway. 1928. *Pennsylvania.* Accepted.

Virgil R. Wertz, B.S., Wisconsin, 1919; M.S., Wisconsin, 1920. Some physical and economic aspects of potato production in South Dakota. 1928. *Wisconsin.*

Arthur F. Wileden, B.A., Wisconsin, 1924; M.A., 1925. The theory of rural community organization. 1929. *Wisconsin.*

Harold Newell Young, B.S., Cornell, 1917. The economic study of bean production. Marketing of beans. *Cornell.*

Harry P. Young, Ph.D., Cornell, 1927. An economic study of dairy farming on 186 farms in the townships of Randolph and Royalton, Vermont. Accepted.

Manufacturing Industries

Luella Densmore Arnold, A.B., Olivet, 1917; A.M., Chicago, 1926. A history of the printing and publishing industry in the United States. 1929. *Chicago.*

Ursula Chase Batchelder, A.B., Bryn Mawr, 1923. The history of the baking industry in Chicago. 1929. *Chicago.*

William E. Chalmers, B.A., Brown, 1925. The automobile industry in its technological, business and labor aspects. 1929. *Wisconsin.*

Myrtle Cline, A.B., Valparaiso, 1914; A.M., Columbia, 1922. History of manufacturies in New York State. 1928. *Columbia.*

Henry Reavis Cox, A.B., Texas, 1921. The American tobacco industry, 1911-1927. 1928. *Columbia.*

Clyde Edward Dankert, B.A., McMaster, 1926. The history of the furniture manufactures in New York State. 1928. *Columbia.*

Carroll R. Daugherty, Ph.D., Pennsylvania, 1927. The development of horsepower equipment in the United States. Accepted. (Published by Government Printing Office, U. S. Geological Survey, Washington, D.C., March, 1928.)

Jean Davis, B.A., Bryn Mawr, 1914; M.A., Wisconsin, 1920. A type study of a southern cotton mill. 1929. *Wisconsin.*

Joshua Levering Evans, Ph.D., Yale, 1927. History of the fur felt hat industry in the United States. Accepted.

Jean A. Flexner, A.B., Bryn Mawr, 1921. The American textile industry. 1928. *Robert Brookings.*

Moses Leo Gitelson, Ph.D., New York University, 1926. A study of the cotton goods converter and the converting industry.

Meredith B. Givens, B.A., Drake, 1920. The iron and steel industry in its technological, business and labor aspects. 1928. *Wisconsin.*

Louis C. Hunter, A.B., Knox College, 1920; A.M., Harvard, 1922. The development of the iron industry in the Pittsburgh district to 1859. 1928. *Harvard.* Completed.

Emily H. Huntington, A.B., California, 1927. Cyclical fluctuations in the cotton manufacturing industry. 1928. *Radcliffe.* Completed.

Asher Isaacs, A.B., Cincinnati, 1923; A.M., 1924. Pottery industry in the United States. 1928. *Harvard.* Completed.

Rockwell Cresap Journey, A.B., Missouri, 1912; A.M., 1913. The cold storage industry in Chicago. 1929. *Chicago.*

Theodore John Kreps, Ph.D., Harvard, 1928. History of the chemical industries in the United States. Accepted.

Robert Joseph Largent, A.B., West Virginia, 1903; A.M., Chicago, 1923. History of the lumber industry in the American colonies. 1928. *Chicago.*

Harold H. McCarty, B.S.C., Iowa, 1923; M.A., 1925. The meat packing industry in Iowa. 1929. *Iowa.*

Donald Hector Mackenzie, B.B.A. and M.B.A., University of Washington, 1925. The economic development of electrical energy in the Pacific Northwest. 1929. *University of Washington.*

Robert James Myers, A.B., Washburn, 1926. The men's clothing industry. 1928. *Chicago.*

Schichero Matsui, LL.B., Dosicha, Japan, 1919; M.A., California, 1922. The silk industry in the United States. 1927. *Wisconsin.* Completed.

Edward W. Morehouse, B.A., Amherst, 1918; M.A., Wisconsin, 1920. A study of the Rochester clothing market, 1919-1922. 1927. *Wisconsin.* Completed.

Cyril O'Donnell, B.Com., Alberta, 1924; A.M., 1925. The history of the Chicago lumber market. 1929. *Chicago.*

Reuben H. Sparkman, B.A., Eastern Texas State Teachers' College, 1920; George Peabody College for Teachers, 1923. A comparative study of cotton mills of the South. 1929. *Wisconsin.*

George H. Trafton, B.A., Dartmouth, 1924. The printing industry in its technological and bargaining aspects. 1929. *Wisconsin.*

Paul Webbink, A.B., Michigan, 1925. Federal or state regulation of the electric power industry. 1929. *Robert Brookings.*

Ruth Woodruff, A.B., Bryn Mawr, 1919; A.M., 1920. Development of the hosiery industry in the Philadelphia market. 1929. *Pennsylvania.*

Gertrude Brown Working, A.B., Mt. Holyoke, 1924; A.M., Radcliffe, 1926. The history of the American silk industry. 1929. *Radcliffe.*

Transportation and Communication

Jules Bogen, Ph.D., Columbia, 1927. The anthracite railroads: a study in American railroad enterprise. Accepted. (Published by Ronald Press, New York.)

Arthur Martin Borak, B.S., Minnesota, 1923; M.A., 1925. The financial history of the Chicago, Milwaukee & St. Paul Railway. 1928. *Minnesota.*

Merwyn G. Bridenstine, B.S., Iowa, 1924; M.A., 1927. Some recent developments in railroad consolidation. 1929. *Iowa.*

Gordon M. Casey, A.B., College of the City of New York, 1923; A.M., Columbia, 1925. Early history of the New York Central, 1830-1880. 1928. *Columbia.*

Felton Chow, B.S., Pennsylvania, 1923. A.H., 1925. The coördination of rail and coastwise transportation in the United States. 1928. *Pennsylvania.*

Pao Hsun Chu, A.B., Cornell, 1924; A.M., Columbia, 1925. The post office. 1928. *Columbia.*

Ti-An Chu, A.B., St. John's University, 1925. Refrigeration services of American railroads. 1928. *Pennsylvania.*

Ida S. Craven, A.B., Wellesley, 1925. The conquest of the railroad: a history of the French railroad. 1928. *Robert Brookings.*

Ramkrishna Gaesh Deshmukh, Ph.D., Harvard, 1927. The development of highways in Massachusetts. Accepted.

Ralph L. Dewey, A.B., Ohio State, 1923; A.M., 1924. The long-and-short-haul principle of rate regulation. 1929. *Michigan.*

Herbert Edward Dougall, B.S., Toronto, 1925; M.B.S., Northwestern, 1926. Canadian railway finance. 1929. *Northwestern.*

C. C. Edmunds, B.A., Wisconsin, 1915; M.A., 1918. The function and regulation of the common carrier motor vehicle. 1927. *Wisconsin.* Completed.

William Owen Ely, Ph.B., Hamline, 1910; Ph.M., Syracuse, 1911. Railway rates and cost of service. *New York University.*

Donald Milton Erb, S.B., Illinois, 1918; S.M., 1924. Railroad abandonments and additions in the United States since 1920. 1929. *Harvard.*

Roland B. Eutsler, B.S., North Carolina, 1923; M.S., 1924. Railroad rate structure in North Carolina. 1928. *Pennsylvania.*

M. L. Fair, A.B., Ohio University, 1923; A.M., Ohio State, 1926. Some aspects of the terminal problem in American transportation. 1929. *Ohio State.*

J. Maxwell Ferguson, Ph.D., Columbia, 1927. State regulation of railroads in the South. Completed. (Published in Columbia Studies in History, Economics, and Public Law.)

Benjamin H. Frame, B.S., Missouri, 1921; A.M., 1925. The effect of transportation rates on the movement of grain to Chicago. 1929. *Chicago.*

Arnold K. Henry, B.S., Pennsylvania, 1921; A.M., 1924. Intercoastal traffic by rail and water. 1928. *Pennsylvania.*

James M. Herring, A.B., Lafayette, 1922; A.M., 1924. Recapture of excess railroad earnings. 1928. *Pennsylvania.*

Shih-Hsuan King, Ph.D., Pennsylvania, 1927. Freight car service: control by the car service division of the American Railway Association. Accepted.

John Howard Layhew, A.B., McGill, 1924; A.M., 1926. The problem of the New York subway. 1930. *Columbia.*

Maxwell A. Lerner, Ph.D., Robert Brookings, 1927. The beginnings of American railroads. Accepted.

Chen-Hsien Li, B.S., Illinois, 1923; M.B.A., Pennsylvania, 1924. Coördination of railroad and motor transportation in the United States. 1928. *Pennsylvania.*

Peter Wei Lin, A.M., Columbia, 1922. Railroad problems in Manchuria. 1929. *Columbia.*

Walter J. McComb, B.S., Pennsylvania, 1918; A.M. 1920. Automatic train control. 1928. *Pennsylvania.*

John Lorne MacDougall, B.A., Toronto, 1921; M.A., 1923. A history of the Canadian Northern Railway. 1929. *Harvard.*

Ross Allen McReynolds, A.B., Missouri, 1920; A.M., 1921. The history of the post office. 1928. *Chicago.*

Paul M. O'Leary, A.B., Kansas, 1922; A.M., Harvard, 1924. Railroad reorganization as exemplified in the Western Pacific and Denver and Rio Grande reorganizations. 1929. *Cornell.*

John H. Patrick, A.B. and B.S., Missouri, 1912; LL.B., George Washington, 1920; LL.M., 1921. The influence of highway development upon the political history of the world. *American University.*

George S. Peterson, A.B., Albion, 1920; M.A., Michigan, 1921. Principles governing highway improvement. 1927. *Michigan.* Completed.

Christopher Roberts, Ph.D., Harvard, 1927. A history of the Middlesex Canal. Accepted.

Emerson P. Schmidt, B.A., Northcentral College, Naperville, 1923; M.A., Toronto, 1924. Urban electrical transportation industry in its technological, business and labor aspects. 1929. *Wisconsin.*

Lewis Everett Severson, A.B., Kansas, 1919; A.M., Stanford, 1923. The financial history of the Illinois Central Railroad since 1870. 1928. *Chicago.*

Festus Paul Summers, A.B., West Virginia, 1923. **The Baltimore & Ohio Railroad.** 1928. *Chicago.*

John Brownson Watkins, Ph.B., Chicago, 1921; A.M., 1924. **The organization and management of the Chicago & Eastern Illinois Railroad.** 1928. *Chicago.*

Conrad Payling Wright, B.A., Oxford, England, 1920; M.A., 1925. **The development of ocean-going steam navigation in the nineteenth century.** 1929. *Harvard.*

Shao-Tseng Wu, A.B., Michigan, 1922; A.M., 1923. **Fair return for American railroads.** 1928. *Pennsylvania.*

Trade, Commerce, and Commercial Crises

Asher Achinstein, Ph.D., Columbia, 1927. **Buying power of wage-earners and the post-war business cycles.** Accepted. (Published in Columbia Studies in History, Economics, and Public Law.)

A. E. Bezsmertny, B.S., Johns Hopkins, 1927. **Commercial relations between the United States and Russia since the World War.** 1930. *Johns Hopkins.*

William M. Blaisdell, A.B., Swarthmore, 1921. **The valorization of Brazilian coffee.** 1929. *Pennsylvania.*

Romaine Elizabeth Boody, A.B., Radcliffe, 1920; A.M., 1925. **English foreign trade in the eighteenth century.** 1929. *Radcliffe.*

Henry Chalmers, A.B. and M.A., Cornell, 1914. **A proposed commercial policy for the United States.** 1928. *Robert Brookings.*

Garnet H. Cutler, B.S., Ontario Agricultural College, 1909. **Canada's foreign trade in agricultural products.** 1929. *Wisconsin.*

Florence Edler, Ph.B., Chicago, 1920; A.M., 1923. **History of the silk trade of Lucca in the Middle Ages.** 1928. *Chicago.*

George Alexander Elliott, A.B., Manitoba, 1920; A.M., 1925. **Terms of trade in international commerce.** 1928. *Chicago.*

Frank Albert Knox, B.A., Queens, 1923. **The Canadian trade balance, 1914-1926.** 1929. *Chicago.*

Raymond Harvey Lounsbury, A.B., Wesleyan, 1925; A.M., 1926. **Control of credit and the business cycle.** 1929. *Cornell.*

Gardiner Coit Means, A.B., Harvard, 1918. **Fluctuations in New England's balance of trade.** 1929. *Harvard.*

H. H. Miller, A.B., Ottawa, 1916; A.M., Chicago, 1924. **Illegal trade in the American colonies.** 1928. *Chicago.*

Isaac Taylor Musser, Jr., B.S., Virginia, 1923; M.S., 1926. **Franco-American trade relations since the World War.** 1928. *Virginia.*

Lehman Patton Nickell, B.S., Virginia, 1923; M.S., 1924. **Hampton Roads as a shipping port.** 1928. *Virginia.*

John J. Quigley, B.A., New York University, 1925; M.A., Columbia, 1926. **The effectiveness of the Federal Trade Commission in administering the federal anti-trust policy.** *New York University.*

Alfred Rive, A.B., University of British Columbia, 1921. **History of the tobacco trade.** 1928. *California.*

Norman A. Robertson, B.A., British Columbia, 1923; B.A., Oxon, 1925. **History of trade regulation in Canada.** 1929. *Robert Brookings.*

Harry Dexter White, A.B., Stanford, 1924; A.M., 1925. **International trade of France.** 1929. *Harvard.*

Charles Raymond Whittlesey, A.B., Philomath College, 1921; A.M., American University of Beirut, 1924. **The Stevenson plan.** 1928. *Princeton.*

Accounting, Business Methods, Investments, and the Exchanges

Harvey Adolphus Andrus, B.A., Northwestern, 1924; M.B.A., Northwestern, 1926. Investment banking costs. *Northwestern.*

C. Canby Balderston, Ph.D., Pennsylvania, 1928. Managerial profit sharing. Accepted.

Chelcie C. Bosland, B.S., Minnesota, 1923; A.M., 1924. A study in tire and rubber stock prices. 1929. *Michigan.*

Robert A. Brady, A.B., Reed, 1923. Standardization of technological research and the returns to ultimate consumer. 1928. *Columbia.*

Malcolm H. Bryan, A.B., Illinois, 1924; A.M., 1925. Price-making on the Chicago Mercantile Exchange with special reference to hedging. 1929. *Chicago.*

Andrew Cairns, B.A., Alberta, 1923; M.S., Minnesota, 1927. A comparative study of grain marketing in the United States and Canada. 1929. *Minnesota.*

Roy E. Cameron, A.B., California, 1922. Valuation of office buildings. 1928. *California.*

Melvin Gardner de Chazeau, A.B., Wisconsin, 1924; A.M., Harvard, 1925. The valuation of public utilities, with special regard to the principal cost of reproduction. 1929. *Harvard.*

Harry W. Cordell, Ph.B., Hiram, 1908; A.M., Chicago, 1915. Installment credit with special reference to the retail furniture trade. 1928. *Ohio State.*

Harvey C. Daines, B.C.S., Albion, 1915; A.B., 1916. Measuring the performance of management. 1929. *Chicago.*

John E. Dalton, A.B., California, 1923; M.B.A., Harvard, 1925. The California Corporate Securities act. 1928. *California.*

Kenneth Dameron, A.B., Beloit, 1922; A.M., California, 1925. Principles of merchandising as applied to men's apparel. 1929. *Columbia.*

Anna Mae Campbell Davis, B.A., Illinois, 1920; M.A., Wisconsin, 1923. The correlation of law and economics in the commodity transaction. 1927. *Wisconsin.*

Royal Edgar Davis, A.B., DePauw, 1921; M.A., 1924. The relation of price of United States Steel bonds to various related series. 1929. *Ohio State.*

Nathaniel H. Engle, A.B., Washington, 1925; A.M., 1926. Trends in the wholesaling of prepared food products. 1929. *Michigan.*

Ruth M. Engle, B.B.A., Washington, 1922; A.M., Michigan, 1927. Some economic consequences of advertising. 1929. *Michigan.*

Charles Grandison Eubank, B.S., Minnesota, 1923; M.S., 1924. Incentive devices in use in Chicago business organizations. 1929. *Chicago.*

Enoch E. Ferebee, B.S., Virginia, 1924; M.S., 1925. The distribution of goods through merchandise warehouses at Chicago. 1929. *Chicago.*

Louis O. Foster, B.S., Illinois, 1923; M.S., 1924. The protection of investors in corporate securities by means of organized agencies. 1929. *Illinois.*

Philip Gordon Fox, A.B., Wisconsin, 1921; A.M., 1924. Price maintenance policies and price-cutting policies. 1928. *Columbia.*

Gerald M. Francis, A.B., Knox, 1921; M.S., Illinois, 1925.. Some economic problems of electric interconnection with special reference to operating economies. 1927. *Illinois.*

WINIFRED L. FROST, A.B., Carleton, 1925. Motion pictures: a problem in control. 1928. *Robert Brookings.*

CHARLES B. GORDY, B.S., Pennsylvania, 1917; A.M., 1921. Scientific management in the automobile assembly industry. 1929. *Michigan.*

WILLARD J. GRAHAM, A.B., Tarkio, 1921; A.M., Chicago, 1924. The effect of mechanical equipment on accounting systems and on accounting personnel. 1929. *Chicago.*

OTTO G. GRESSENS, B.S., Illinois, 1921; M.S., 1924. The budget and budgetary procedure in public utilities with particular reference to forecasting the key figures of the operating budget. 1927. *Illinois.*

HERMAN L. GRUEHN, B.S., Pennsylvania, 1924. The economics of overhead costs as applied to rates, and the acquisition of new business, in public utilities. 1930. *Pennsylvania.*

IDELLA F. GWATKIN, B.A., Michigan, 1926; M.A., 1927. Standardization: a study of group control. 1929. *Robert Brookings.*

W. CARLTON HARRIS, A.B., Pennsylvania, 1911; LL.B., 1913. The economic and legal aspects of rental clauses of long term leases. 1928. *Pennsylvania.*

LLOYD A. HELMS, A.B., De Pauw, 1925; A.M., Illinois, 1926. The corporate treasuries of public utility companies. 1929. *Illinois.*

EVERETT CHERINGTON HUGHES, A.B., Ohio Wesleyan, 1918. A study of an institution: the Chicago Real Estate Board. 1927. *Chicago.* Completed.

JAMES ROY JACKSON, Ph.B., Chicago, 1923; A.M., 1924. A comparison of the investment value of common and preferred stocks. 1927. *Chicago.* Completed.

DAVID B. JEREMIAH, B.S., Pennsylvania, 1915; A.M., 1917. The duties and liabilities of a corporate trustee to the bondholders, arising out of a mortgage trust deed. 1929. *Pennsylvania.*

LEWIS W. JONES, Ph.D., Robert Brookings, 1927. The export of American capital. Accepted.

PAUL S. KEISER, B.S., Pennsylvania, 1920; A.M., 1923. Retail hardware dealers' mark-ups in Philadelphia. 1929. *Pennsylvania.*

ALBERT SAMUEL KEISTER, A.B., Otterbein, 1910; A.M., Columbia, 1911. The management of personal savings. 1927. *Chicago.* Completed.

OSCAR E. KIESSLING, Ph.D., Robert Brookings, 1927. The coal retailing problem in Washington. Accepted.

RIXFORD KNIGHT, B.S., Connecticut Agricultural College, 1917; A.M., Columbia, 1926. Contractual expenses and submarginality. 1929. *Columbia.*

WALTER HERMAN CARL LAVES, Ph.B., Chicago, 1923. A history of the German policy with respect to foreign investments. 1927. *Chicago.* Completed.

WARREN W. LEIGH, A.B., Utah, 1920; M.B.A., Northwestern, 1924. Wholesaling. 1929. *Northwestern.*

RALPH CLARK LIMBER, A.B., Allegheny College, 1921; A.M., Wisconsin, 1923. The costs of marketing. 1929. *Northwestern.*

WILLIAM WIRT LOCKWOOD, Ph.B., De Pauw, 1898. The putting-out system in Chinese industry. 1929. *Harvard.*

WILLIAM N. LOUCKS, Ph.D., Pennsylvania, 1928. The Philadelphia plan of financing second mortgages and homes through building and loan associations. Accepted.

BRECK P. MCALLISTER, A.B., California, 1923; LL.B., Harvard, 1926. An industry affected with a public interest. 1928. *Robert Brookings.*

Clarence Ernest McNeill, A.B., Doane College, 1912. Financial aspects of the New York subway. 1928. *Yale.*

Edward Orth Malott, B.S., Purdue, 1916; M.S., 1923; M.B.A., Northwestern, 1926. A study of municipal ownership in Wisconsin. *Northwestern.*

Albert H. Marvill, B.S., Pennsylvania, 1922. Cost of home ownership in the Philadelphia suburbs. 1929. *Pennsylvania.*

Robert L. Matz, B.A., Ursinus, 1912; M.A., 1919; M.B.A., New York University, 1926. Marketing from the standpoint of the consumer. *New York University.*

Ralph Waldo Morrish, B.S., Purdue, 1920. Organization of fairs and expositions. 1928. *Chicago.*

Oscar S. Nelson, B.S., Pennsylvania, 1923; A.M., 1926. The development of accounting theory. 1929. *Pennsylvania.*

Philip C. Pendleton, B.S., Pennsylvania, 1922; A.M., 1924. The effect of the lien and conveyance theories upon mortgage interest. 1930. *Pennsylvania.*

William John Reilly, B.S., Carnegie Institute of Technology, 1921; M.S., 1923. The place of the research department of the modern advertising agency in market research. 1927. *Chicago.* Completed.

Carl Burton Robbins, A.B. Stanford, 1924; M.A., 1925; M.B.A., Harvard, 1927. No-par stock. 1928. *Stanford.*

Ernest Hugh Shideler, A.B., Ottawa, 1915. The chain store. 1927. *Chicago.* Completed.

E. G. Sutherland, A.B., Utah, 1923. A re-alignment of factors of production, stressing the labor factor and a criticism of cost accounting system. 1928. *California.*

Herbert F. Taggert, A.B., Michigan, 1920; M.A., 1922. Real estate accounts. 1928. *Michigan.*

Erminio Tallia, B.S., Pennsylvania, 1924; M.B.A., 1925. History of the personnel movement in the United States. 1928. *Columbia.*

Alfred James Weaver, A.B., Texas, 1920; A.M., 1924. The organization and evaluation of market news agencies in the grain trade at Chicago. 1928. *Chicago.*

James Clifford White, A.B., Virginia, 1923; M.S., 1924. The Public Service Company of Northern Illinois: a study in organization. 1929. Chicago.

E. F. Witte, B.S., Nebraska, 1925; A.M., 1926. Organization, management and control of chain drug stores. 1929. *Chicago.*

Capital and Capitalistic Organization

Irston Robert Barnes, Ph.B., Yale, 1926. Commission regulation of the capital issues and rates of public utilities in Massachusetts. 1928. *Yale.*

James C. Dolley, A.B., McKendree, 1919; M.A., Illinois, 1923. Holding company control in electric power. 1928. *California.*

Kenneth Field, A.B., Maine, 1925; A.M., Illinois, 1926. The holding company. 1928. *Illinois.*

William H. Husband, A.B., Michigan, 1921; A.M., Ohio State, 1922. The financing of industrial combinations. 1928. *Ohio State.* Completed.

RUDOLF KARL MICHELS, Dr. of Law, Cologne, 1923. Cartels, combines and trusts in post-war Germany. 1928. *Columbia.* Accepted. (Published in Columbia Studies in History, Economics and Public Law.)

MARCUS WHITMAN, B.A., Wisconsin, 1924; M.A., 1925. Public utility holding companies, 1928. *Wisconsin.*

Labor and Labor Organizations

ALBERT ABRAMSON, A.B., Bowdoin, 1926. Labor relations in the automobile industry. 1928. *Columbia.*

EDWARD J. ALLEN, Labor organization in the electric industry. 1928. *Columbia.*

DONALD E. ANTHONY, A.B., Stanford, 1922; M. A. Cornell, 1923. Labor conditions in the canning industry of the state of California. 1928. *Stanford.*

JOHAN BAKHUYSEN-SCHULD, Dr. of Law, Leyden, 1920. Injunctions at the bituminous coal fields. 1928. *Columbia.*

RUTH WHITNEY BARRETT, A.B., Radcliffe, 1923; M.A., California, 1924. Administration of labor laws protecting women and children in the United States. 1929. *Radcliffe.*

EARL RUCKER BECKNER, A.B., Butler, 1923; A.M., Chicago, 1924. The development of the Illinois labor code. 1927. *Chicago.* Completed.

WILLIAM WHIPPLE BENNETT, A.B., Doane, 1919; A.M., Princeton, 1921. Collective bargaining in railway train service. 1929. *Princeton.*

GEORGE E. BIGGE, A.B., Michigan, 1922; M.A., 1923. Trade unionism and technical change. 1929. *Michigan.*

JAMES F. BOGARDUS, Ph.D., Pennsylvania, 1927. Industrial arbitration in the book and job printing industry of New York City. 1927. *Pennsylvania.* Accepted.

GLADYS BOONE, A.B., Birmingham, 1916; A.M. 1917. History of the Women's Trade Union League. 1929. *Columbia.*

ELIZABETH BRANDEIS, B.A., Radcliffe, 1918; M.A., Wisconsin, 1924. The wage earner and the common rule: a study of the employer-employee relation. 1927. *Wisconsin.*

ALFRED W. BRIGGS, B.S., Illinois, 1923; M.A., Wisconsin, 1924. Labor in the window glass industry. 1929. *Wisconsin.*

DOUGLASS VINCENT BROWN, A.B., Harvard, 1925; A.M., 1926. The family wage. 1929. *Harvard.*

EMILY CLARK BROWN, A.B., Carleton, 1917; A.M., Chicago, 1923. Master printers' organizations with special reference to collective bargaining in the book and job printing trades of Chicago. 1927. *Chicago.* Completed.

JAMES DOUGLAS BROWN, Ph.D., Princeton, 1928. The history and problems of collective bargaining by railway maintenance of way employees. Completed.

GEORGE JOHNSON CADY, B.A., Franklin, 1922; M.A., Northwestern, 1926. Historical development of wages theories. 1929. *Northwestern.*

WARREN B. CATLIN, Ph.D., Columbia, 1927. The labor problem. Accepted. (Published by Harper & Brothers, New York.)

CARROLL L. CHRISTENSON, Ph.B., Chicago, 1924. Labor organization and collective bargaining in Chicago. 1929. *Chicago.*

EWAN CLAGUE, B.A., Washington, 1917; M.A., 1921. Changes in efficiency of labor in specific industries in the past thirty years. 1929. *Wisconsin.*

William Charles Cleveland, A. B., Beloit, 1923. The theory of collective bargaining. 1928. *Chicago.*

John Earl Conn, A. B., Findlay, 1910; A. M., Columbia, 1911. New York State Federation of Labor. 1929. *Columbia.*

Wilfred Harris Crook, Ph.D., Harvard, 1928. The general strike in theory and practice. Accepted.

Frank G. Dickinson, A. B., Illinois; A. M., Penn State, 1923. Public construction and cyclical unemployment, 1919-1925. 1927. *Illinois.*

Corwin D. Edwards, Ph.D., Cornell, 1928. The first International Workingmen's Association.

Gaston F. M. Eyskens, Licencié en Sciences, Louvain, 1926; M. S., Columbia, 1927. Ten years of American labor history since the Great War. 1928. *Chicago.*

Harrison Bernard Fagan, A. B., Syracuse, 1916; A. M., 1917; Docteur de l'Université Lyon, 1922. Printing trade unions in Chicago with special reference to collective bargaining in the newspaper trade. 1928. *Chicago.*

Mildred Fairchild, A. B., Oberlin, 1916; M. A., 1925. The social significance of specialization in industry, in its relation to the skill of the workman and the source of his satisfaction in his work. 1929. *Bryn Mawr.*

Lincoln Fairley, A. B., Harvard, 1923; A. M., 1924. Can trade unions function as complements to employee representation plans? 1929. *Harvard.*

Waldo E. Fisher, B.S., Columbia, 1917; A.M., Pennsylvania, 1924. Wage rates in the coal industry. 1929. *Pennsylvania.*

Rose Dorothy Fitzgerald, B. A., Smith, 1924. History of geographical distribution of foreign labor in Massachusetts industries. 1928. *Yale.*

H. LaRue Frain, B. S., Pennsylvania, 1923; M. A., 1925. An examination of wages in seven standard machine tool occupations in the Philadelphia market. 1928. *Pennsylvania.*

Harold Groves, B. A., Wisconsin, 1919; M. A., 1922. The machinist in industry; a study of the history and economics of his craft. 1927. *Wisconsin.*

Lawrence Ridge Guild, Ph. D., Yale, 1927. Labor conditions in Ohio villages. Accepted.

William G. Haber, B. A., Wisconsin, 1923; M. A., 1925. Industrial relations in the building industry. 1927. *Wisconsin.*

Otto Theophilius Johnson, B. S., Vermont, 1914; M. A., George Washington, 1922; M. S., 1923. The labor situation in the granite industry in the Barre district, Vermont. *American University.*

Victor S. Karabasz, Ph. D., Pennsylvania, 1927. Study of mechanical power transmission accidents, State of Pennsylvania, 1920-25. Accepted.

Joseph Martin Klamon, Ph. D., Yale, 1927. The legal status of unincorporated unions. Accepted.

Paul Kosok, B. S., College of the City of New York, 1918. The workers' and soldiers' councils during the German Revolution of 1914-1919. 1928. *Columbia.*

Morris Lattman, A. B., George Washington; A. M., Columbia. Labor as a force in shaping the course of state and federal legislation, 1827-1837. 1928. *Columbia.*

Charles Leese, A. B., Gettysburg, 1924; A. M., Pennsylvania, 1926. Collective bargaining in the photo-engraving industry with special emphasis upon arbitration proceedings in the Philadelphia Local. 1929. *Pennsylvania.*

H. A. LOGAN, B. A., Acadia, 1912; B. A., Yale, 1913. A history of trade union organization in Canada. 1925. *Chicago.* Completed. (Published by the University of Chicago Press, 1928.)

J. MILTON MCDANIEL, A. B., Johns Hopkins, 1924. Strikes in public utilities. 1929. *Johns Hopkins.*

ARCHIBALD MCDONALD MCISAAC, A. B., Michigan, 1923; A. M., Princeton, 1924. The order of railroad telegraphers: a study in unionism and collective bargaining. 1929. *Princeton.*

MABEL AGNES MAGEE, S. B., Simmons, 1912; M. A., Columbia, 1920. The women's clothing industry of Chicago with special reference to relations between the manufacturers and the union. 1927. *Chicago.* Completed.

ANITA MARBURG, A. B., Vassar, 1921. The anthracite strike of 1922. 1928. *Robert Brookings.*

CHARLES F. MARSH, A. B., Lawrence, 1925; A. M., Illinois, 1926. Trade unionism in the electric light and power industry. 1928. *Illinois.*

GEORGE MARSHALL, B. A., Columbia, 1926; M. A., 1927. The machinists' union: a study in institutional economics. 1929. *Robert Brookings.*

THOMAS LOWELL NORTON, B. S., Dartmouth, 1923; M. C. S., 1924. Labor problems in the shoe industry. 1928. *Columbia.*

HAZEL GRANT ORMSBEE, Ph. D., Bryn Mawr, 1926. The young employed girl. Accepted. (Published by the Womans Press, New York City, 1927.)

ELINOR EVANGELINE PANCOAST, Ph. B., Chicago, 1917; A. M., 1922. The photo-engravers' union. 1927. *Chicago.* Completed.

ALLON PEEBLES, A. B., British Columbia, 1920. The American Federation of Labor: a study in labor ideology. 1928. *Columbia.*

DAVID J. PRICE, B. S., Penn State, 1925; M. S., George Washington, 1927; Engineer of Mines, Penn State, 1927. Industrial explosions: their causes and prevention. 1928. *American University.*

LOUIS REED, A. B., Amherst, 1914; A. M., Columbia, 1925. The Passaic strike. 1928. *Columbia.*

STERLING F. RIGG, B. A., Monmouth, 1923; M. A., Northwestern, 1925. Certain union groups with special reference to organizability and sources of power wielded. 1929. *Chicago.*

PAUL A. RAUSHENBUSH, B. A., Amherst. Mitten men and management in Philadelphia. 1928. *Wisconsin.*

DAVID M. SCHNEIDER, Ph. D., Johns Hopkins, 1927. The Workers' (Communist) party and American trade unions. (Published by the Johns Hopkins Press, 1928.)

MERRILL TEN BROECK SPALDING, A. B., Harvard, 1920; A. M., 1925. Later control under the Soviet government in Russia. 1929. *Harvard.*

ALVAH EUGENE STALEY, A. B., Hastings, 1925. A history of the Illinois State Federation of Labor. 1928. *Chicago.*

ALBION G. TAYLOR, A. B., Des Moines, 1915; A. M., Nebraska, 1920. Labor policies of the National Association of Manufacturers. 1927. *Illinois.* Published.

GEORGE W. TERBORGH, A. B., Oberlin, 1922; A. M., Chicago, 1925. The application of the Sherman law to trade union activities. 1928. *Robert Brookings.*

PEDRO LOPEZ TUPAS, A. B., University of the Philippines, 1918; A. M., New York University, 1925. A study of labor conditions in the Philippines. 1928. *Columbia.*

CHRISTIAN VAN RIPER, A. B., Ohio, 1919. The history of labor legislation in Ohio. 1928. *Chicago.*

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